




3 1761 11649610 0

Government
Publications



Digitized by the Internet Archive
in 2023 with funding from
University of Toronto

<https://archive.org/details/31761116496100>

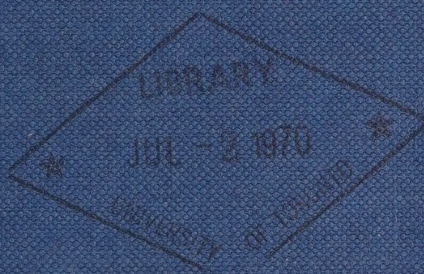
CA2 ØNH Y
-A56

Government
Publications

ANNUAL REPORT

for the fiscal year ending
March 31st

1969



Department of Highways
ONTARIO

CA 20NH 4
-A56

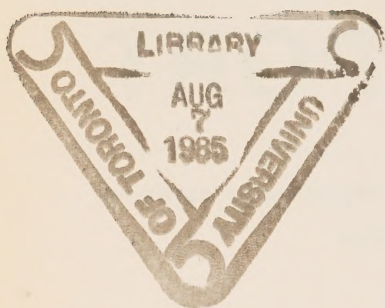
ANNUAL REPORT

for the fiscal year ending
March 31st

1969

Department of Highways

ONTARIO



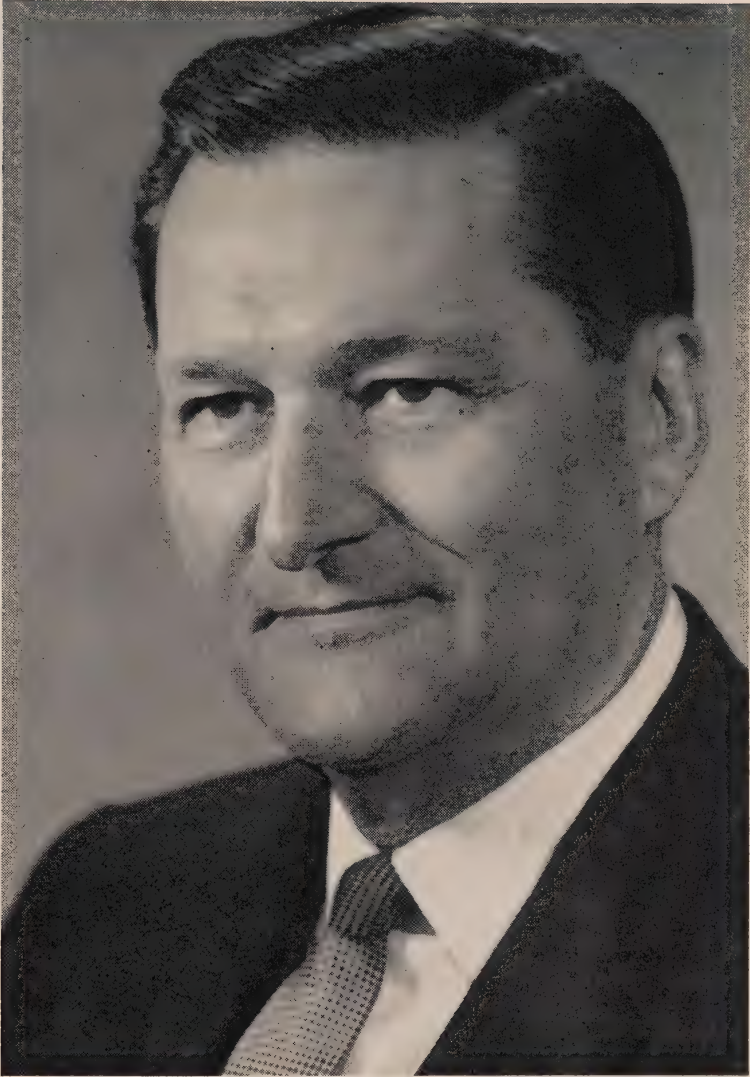
TO THE HONOURABLE WILLIAM ROSS MACDONALD, P.C., C.D., Q.C., LL.D.
Lieutenant-Governor of the Province of Ontario

MAY IT PLEASE YOUR HONOUR :

The undersigned takes pleasure in laying before you the Annual Report of the
Department of Highways, Ontario, for the fiscal year ending March 31, 1969.

Respectfully submitted,
GEORGE E. GOMME,
Minister of Highways

Parliament Buildings,
Toronto, Ontario,
December 31, 1969.



*Hon. George E. Gomme,
Minister of Highways, Ontario*

TO THE HONOURABLE GEORGE E. GOMME,
Minister of Highways, Ontario.

Sir :

I have the honour to present the report of the activities of the Department of
Highways for the fiscal year ending March 31, 1969.

Respectfully submitted,
A. T. C. McNAB,
Deputy Minister.

Downsview, Ontario,
December 30, 1969.

Contents

ORGANIZATION CHART OF THE DEPARTMENT OF HIGHWAYS, ONTARIO . . .	
AN INTRODUCTION	1
DEPUTY MINISTER'S SUMMARY	8
PLANNING BRANCH	10
DESIGN BRANCH	17
ELECTRONIC COMPUTING BRANCH	25
PROGRAM OFFICE	28
OPERATIONS BRANCH—Construction and Maintenance	31
CONSTRUCTION, BY HIGHWAYS, 1968-69	45
RESEARCH BRANCH	79
SERVICES BRANCH	87
PERSONNEL BRANCH	90
MUNICIPAL ROADS DIVISION	91
HIGHWAY SAFETY	101
SPECIAL REPORTS	103
FINANCIAL BRANCH	108

APPENDICES

Financial Branch

1. Department Expenditures on King's Highways, Secondary Highways, Tertiary Road, Access and Industrial Roads, Connecting Links, Development Roads, Roads in Unincorporated Townships by County and Territorial District	122
2. Development Road Expenditure in Municipalities by County and Territorial Districts	152
3. Unincorporated Townships Statute Labour Board Road Expenditure by Territorial Districts	159
4. Unincorporated Townships Local Road Board Expenditure by Territorial Districts	163
5. Unincorporated Townships Special Road Expenditure for Settlers by Territorial Districts	167
6. Unincorporated Townships Special Road Expenditure for Indian Reserves by Territorial Districts	171
7. Department Expenditures by Highways	172

Operations Branch — Municipal Roads Division

8. Chronological Summary of Road Expenditures and Provincial Subsidy	179
9. County Road Mileages and Expenditures	180
10. Incorporated Townships—Chronological Summary of Road Expenditure and Provincial Subsidy Including Improvement Districts and Indian Reserves	181
11. Cities, Towns, Villages—Chronological Summary of Road Expenditures and Provincial Subsidy	182
12. Summary of Expenditures on Urban Streets, 1968	183
13. Summary of County Road Expenditures	184
14. Mileage of Urban Road Surfaces—1968	186
15. Mileage of Rural Road Surfaces—1968	188

Program Division

16. Summary of King's Highway Mileage by Highway Districts	192
17. Summary of Secondary Highway Mileage by Highway Districts	193
18. Summary of Tertiary Road Mileage by Highway Districts	194
19. Types of Surface on The King's Highways	195
20. Types of Surface on Secondary Highways	196
21. Types of Surface on Tertiary Roads	196
22. Road Mileages in Ontario—1968	196

Services Branch — Right-of-Way Division

23. Schedule of Controlled Access Highways	197
24. Schedule of Existing Roads Assumed as Portion of The King's Highway, Secondary Highway and Tertiary Road Systems	198
25. Schedule of Designations and Re-Designations of Sections of the King's Highway, Secondary Highway and Tertiary Road Systems	199
26. Schedule of Reversions and Transfers of Sections of the King's and Secondary Highway Systems	201

Ferry Services	202
----------------	-----

ORGANIZATION CHART

© 2001 by John Wiley & Sons, Inc. All rights reserved. Reproduction or translation of this work is prohibited without written permission from John Wiley & Sons, Inc.

191 FEBRUARY 1994

An Introduction

DEPARTMENT OF HIGHWAYS, ONTARIO

DHO, with headquarters at Downsview, administers 18 districts and five regions. Throughout the world there are few highway systems equal to that enjoyed by the people of Ontario—despite the fact that the province is larger in area than any American state and larger than most European nations, and has a population of only a little more than seven million.



The location of DHO Headquarters, at the junction of Hwys. 400 and 401, puts it in the thick of the Department's action.

In the King's Highways system, the roads for which the Department is directly responsible, there are now more than 13,000 miles. These must serve large urban centres with their streams of high density traffic, must provide convenient connections between these centres, serve remote mining towns, provide easy access to holiday areas, and stand up to temperatures ranging from 100 degrees F. in summertime to 40 degrees below zero in the northern winter.

The Ontario Department of Highways is also faced with the problem of building highways for a number of vehicles that is constantly rising. At present, for example, in Ontario there is roughly one vehicle for every three people. Within 20 years this is expected to rise to one vehicle for every 2.4 persons.

In 1915, the Ontario Department of Highways was formed, and the first road built on a cost-sharing basis between the province and the municipalities was Highway 2, linking Toronto and Hamilton.

Since World War II, the Government of Ontario, through the Department of Highways, has been steadily expanding the over-all highway program. In 1943, \$19 million was spent. By 1952 the comparable figure was \$151 million. This year it was \$464 million. And in the past twenty years the amount spent on maintenance has tripled, construction increased from \$22 million to \$190 million, and subsidies to municipalities have risen from \$15 million to \$123 million.

Government of Ontario Transit (GO) which began operations in 1967, provides rail commuter service between Oakville on the west of Toronto and Pickering on the east and operates 51 trains daily.

The Department of Highways—like other Ontario Government departments—is headed by a Minister of the Crown, who is an elected member of the Provincial Parliament.

For advice on engineering and general policy matters, the Minister is aided by his Deputy Minister who is a senior civil servant with over-all responsibility for the day-to-day operation of the department.



Highways begin with planning. And this busy drafting group are only a few of many around DHO Headquarters and in district offices throughout the Province.



Millions of items of DHO data are processed each year by girls in the Electronic Computing Branch key punch room.

The Deputy Minister, in turn, delegates considerable authority to two Assistant Deputy Ministers, one for Engineering and one for Administration.

Because of the complexity of engineering required in a program as vast as that carried out by DHO, the department has been divided into several branches, all but two of which come within the jurisdiction of either one of the two Assistant Deputy Ministers. Under the Assistant Deputy Minister (Administration) are the following main branches and sections: Financial, Services, Engineering Audit Office and Electronic Computing Branch.

Some of these branches embrace a wide range of diverse activities and are, for this reason, subdivided into special sections, many of which employ several hundred technical and non-technical persons, both at Headquarters and in the field. For example, the Services Branch contains these sections: Land Surveys, Property, Equipment, Supply (including purchasing and Stores) Office Services, Special Services, Tendering and Documents.

The Financial Comptroller is responsible for the funds allocated to the department in Ontario's annual budget. His Branch pays contractors and suppliers, administers the pay lists, audits all monetary transactions in the field and pays municipal subsidies. The Branch also collects revenues from such sources as disposal of surplus land and equipment and from tolls collected on Ontario's two toll bridges.

The Engineering Audit Section is subdivided into Field Audit and Contract Checking. Under the direction of the Field Audit Supervisor, the auditing of engineering records is carried out on a regional basis. During the design stages of a proposed construction project, a spot survey is performed to ensure that pre-engineering field data is complete and accurate. Special attention is given to the contractor's interim payments, to ensure that the amounts paid agree with the actual work completed.

The Contract Checking Sub-section, located at Head Office, is responsible for the review of the final calculations as prepared by the various district offices, of all departmental contracts and projects. The final payment to a contractor or supplier is based on the quantities as audited by this group.

The Electronic Computing Branch is responsible for all data processing work done for the Department of Highways, and for the design, development and application of systems requiring the use of a high-speed computer and auxiliary equipment.

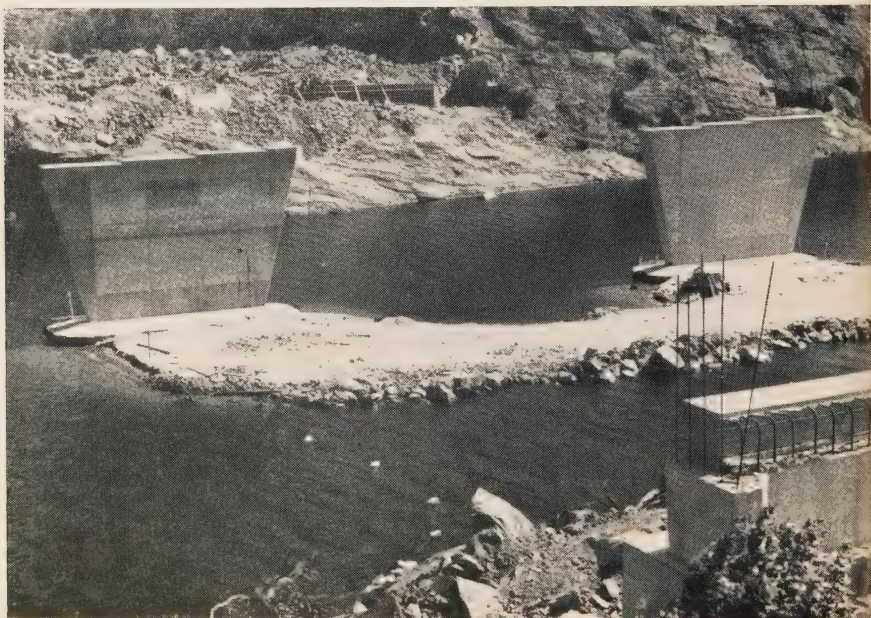
A staff of engineers and mathematicians, trained on problem analysis, systems design and program development is available to work with any branch or section that has a problem requiring a solution involving electronic computers. Another group is ready to assist on systems and methods design in non-engineering areas.

Currently the Branch handles work for Accounting, Personnel, Road and Bridge Design, Traffic and Planning Studies, Field Operations and Surveying. Continuous research is carried on to find additional applications for Electronic Computing.

Consultation is also extended to other departments of the government and the Electronic Computing Branch is officially recognized as the engineering and scientific computer installation for the Government.

The Assistant Deputy Minister (Engineering) is responsible for most of the engineering and other technical functions of the department, carried out by four branches: Planning, Design, Operations and Research.

The Planning Branch has two main offices. Traffic and Planning Studies. The first is responsible for the long-range traffic needs studies carried out for all major areas of the Province, using origin-destination data, economic and population growth data, land use and traffic volume data to assess immediate, and predict long-range highway needs on which construction programs are based. The second office develops these studies using mathematical model techniques with extensive computer application.



Gull Lake Bridge on Huntsville Bypass.

A third office, Functional Planning, prepares the plans, recommending a design criteria governed by highway speed, horizontal and vertical alignment, control of access and a multitude of other requirements. Feasibility of the recommended scheme must be proven by soils investigation, economic studies and liaison with all affected authorities.

The Design Branch, which includes a large Bridge Office, designs all highways and structures and carries out all pre-engineering. It has sections devoted to Photogrammetry, Engineering Surveys, Bridge and Road Design. In the branch we find sub-sections specializing in Drafting, Municipal Bridge Liaison and Regional Project Design, to mention a few. In this division, too, there is representation in the five regions.

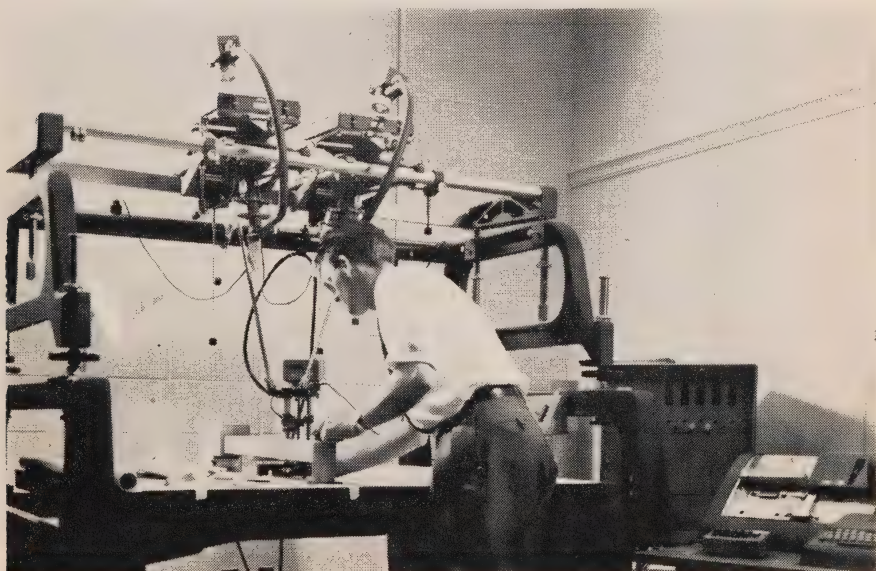
In charge of the Operations Branch is a Director of Operations. His branch consists of four divisions: Construction, Maintenance, Municipal Roads, and Materials and Testing.

The Operations Branch, employing approximately 75 percent of the total staff, is the most extensive unit in the D.H.O. organization, since it covers the entire province through 18 operating districts.

The District Offices, under the District Engineers, supervise the contract work within their boundaries and carry out year-round maintenance on provincial highways.

The Construction Division is responsible for all highway construction in the provincial system. Its Contract Control Section keeps a constant check on the progress of all work done by outside contractors, and its Specifications Engineer is responsible for the writing of specifications to be used in contracts awarded by the department.

The Municipal Roads Division administers the subsidies paid to municipalities, approves municipal construction plans and places departmental experience and other facilities at the disposal of municipal engineers.



Photogrammetry—beginning with aerial maps—is a great aid to engineering and design in today's highly computerized world.

The Materials and Testing Division carries on a continuous program, testing construction materials, soils and geological conditions. It also does research into new materials, techniques, methods, and seasonal and climatic effects on roads.

The Maintenance Section has the onerous task of keeping Ontario's nearly 13,000 miles of provincial highways in top shape throughout the year so that the users of our highways may travel in comfort and safety regardless of weather conditions.

In spring, the ravages of our severe winters must be repaired and the roads put in shape for the high-volume traffic during the summer months. During the summer, the Maintenance Section takes on additional chores, for example weed control, grass cutting and seeding along the rights-of-way, dust control inspection, painting and repair of the 4,000-odd bridges in the provincial system, supervision of the numerous picnic sites along our roads, replacement of damaged signs and many other time-consuming maintenance chores.

Months before the first indications of winter, all winter maintenance equipment is made ready. Sand and salt is stockpiled at strategic places throughout the province. Well over one million tons of sand and upwards of 300,000 tons of salt are used every winter on our provincial highways.

With winter's first onslaught, an army of some 4,400 men and nearly 2,500 snow clearing units of various types, take to the roads in the seemingly never-ending, day-and-night struggle to keep our highways open to traffic.



This stretch north of Apsley on Hwy. 28 shows the kind of open road that now leads into most parts of Ontario.

Winter maintenance alone takes a \$24 million slice out of the annual highway budget, but without the often super-human effort of men and machines, it is doubtful that our vast highway system could come through our severe winters in a condition that commands the respect and admiration of highways departments the world over.

To facilitate highway maintenance, all districts are equipped with two-way radio systems which keep the district offices and maintenance yards in constant touch with highway patrols and other mobile units.

A Branch particularly helpful in planning for the future is Research. Among other things, it administers the Joint Highway Research Program under which projects are carried out by the engineering departments of various Ontario universities. And reflects the changing role of DHO by studying modes of transportation other than by privately owned motor vehicle.

One of the largest government departments, DHO normally employs around 10,000, the greatest number being distributed throughout the 18 districts and five regions.

Ontario's growth in population and expansion of industry and public services, provide a constant challenge to the engineers and technicians of the Department of Highways.

For they are the most vital economic link to the future progress of the province, and advances in transportation technology are demanded not only by the citizens of Ontario but by 32 million tourists who, each year, visit our Province.



*A. T. C. McNab
Deputy Minister, Department of Highways, Ontario*

DEPUTY MINISTER'S SUMMARY

During the 1968-69 fiscal year the department's activities continued on a broad scale to expand and improve the provincial and municipal highways and roads networks.

The year also saw important re-organization and streamlining of operations designed to further orient the department to meet the problems developing in all aspects of ground transportation, with particular emphasis in the mass transportation field, as exemplified in the operation of Government of Ontario Transit commuter services.

Out of our total budget of \$438,640,541, it is noteworthy that the amount of funds that we provided to municipalities to assist in the payment of their roads and streets programs amounted to \$169,212,853, an increase of \$3,652,573 over the previous fiscal year. This expenditure sets a new record and reflects our concern for the recognized need of increasing municipal aid for transportation in local areas.

Details of the department's activities during the current fiscal year will be found in the following pages.

Following is a summary of expenditures, as reported by the Financial Comptroller, with comparative figures for the previous year:

	Fiscal Year Ending	
	March 31, 1969	March 31, 1968
Gross capital payments on construction of King's		
Highways and Secondary Highways	\$192,003,567	\$197,028,260
Less: Recoveries on		
(1) Trans-Canada Highway		
(2) Ottawa-Queensway		
(3) Railway Bridges		
(4) City of Ottawa	<u>6,357,214</u>	<u>7,548,485</u>
Net capital payments on construction of King's		
Highways and Secondary Highways	\$185,646,353	\$189,479,775
Ordinary expenditures on King's Highways and		
Secondary Highways including maintenance and		
general operating expenses	83,781,335	77,986,211
Provincial subsidies on municipal roads and		
streets, development roads, roads in unincorporated		
townships and connecting links	<u>169,212,853</u>	<u>155,560,286</u>
Total Net Expenditures	\$438,640,541	\$423,026,272

TRAFFIC AND PLANNING STUDIES OFFICE

Expansion of the role of the Traffic and Planning Studies Office has resulted in reorganization of the Planning Studies Section. Work carried out within the section now falls into three categories :

- (a) Area Highway Planning
- (b) Urban Transportation Planning
- (c) Special Studies

(A) Area Highway Planning

Area highway planning studies when completed will cover the province. They will establish the provincial highway system through a twenty-year planning period. During the past fiscal year, three studies have been publicly released. These are, The Brantford Area Highway Planning Study, The Highway 17—Ottawa to North Bay Study and The Kingston Area Highway Planning Study. Three additional studies were completed except for public presentation and final report. These are, the Peterborough Area Highway Planning Study, The Barrie-Simcoe County Area Highway Planning Study and the Lake Huron-Georgian Bay Area Highway Planning Study. Their publication will result in eleven completed studies. Final reports are now available for the following Area Highway Planning Studies : Niagara Peninsula, London, Eastern Ontario, Southwestern Ontario, Highway 17—Ottawa to North Bay and Kingston. In addition to the above, the following studies are in progress :—

(1) *Parry Sound- Muskoka Area Highway Planning Study*

This project is nearing completion.

(2) *Toronto Area Highway Planning Study—Northeastern Section*

Delay in this study has been encountered due to other planning projects in the Metro Toronto area.

(3) *Sudbury-North Bay Area Highway Planning Study*

The data collection stage of this study has been completed ; analysis stage is in progress.

(4) *Algoma Area Highway Planning Study*

Data collection for this study was completed and the information is being prepared for analysis.

(5) Thunder Bay Area Highway Planning Study

Roadside interviews and home telephone surveys were completed during the current year. Preparation of the data for analysis is progressing.

(6) Kenora-Rainy River Area Highway Planning Study

Preliminary planning and data collection for this study were completed during the summer.

(7) Kitchener Area Highway Planning Study

This study has been reorganized to serve two functions. First, it is a highway planning study fulfilling the requirements of the Department of Highways. Secondly, it has been adapted to provide transportation recommendations for the Waterloo-South Wellington Planning and Development Study.

(8) Northeastern Ontario Highway Planning Study

Preliminary planning for this study was initiated and data collection will take place this summer.

(B) Urban Transportation Planning

The purpose of an Urban Transportation Study is to :

- (a) develop a comprehensive transportation plan integrated with the adopted development plan
- and
- (b) design methods of programming and implementing the plan.

In addition to identifying the transportation requirements for urban municipalities over a 20-year planning period, and developing a 5-year construction program, emphasis is now also placed on tailoring this program to the financial capabilities of the municipalities. Where freeways and expressways are part of the study, an approach is taken that will ensure that the development of the corridor which includes the expressway and adjacent land developments will derive maximum benefits for the invested capital.

It is becoming apparent that, in general, it is desirable to have reviews of studies every year and updates of studies are generally required every 5 years.

During the fiscal year 1968/69, six studies were completed which brings the total number of completed studies to 53. In progress now in the Urban Transportation Studies Section are 23 studies, of which 2 are of the comprehensive type.

In addition, two large traffic simulation models are being developed, one called TARMS (Toronto Area Regional Model Study) which includes Toronto, Hamilton, Barrie, Oshawa, Whitby and Bowmanville and a second called the Kitchener Area Highway Study Model which includes Kitchener, Guelph, Galt and Preston. The object of these studies is to develop traffic simulation models which give a common base to traffic studies carried out by various levels of government within the region, thus making possible realistic assessment of the investments required in various forms of public transportation facilities. Continuous contacts and co-operation with other government departments and municipal planning offices are required for these studies.

(C) Special Studies

The following is a study of Special Studies :

1. Commuter Rail Study

A study of the potential patronage of eight additional commuter lines, radiating from Toronto, was carried out to identify the most desirable corridors for the expansion of the GO Transit System. This report was submitted to the GO Transit Office in December 1968,

and, was subsequently presented with their own recommendations, to the Cabinet. As an adjunct to this study an analysis was made of a proposal to establish an additional station at De Grassi Street on the GO Transit Line.

2. Functional Design Studies

The following projects requiring functional design traffic volumes for the Functional Planning Office, were completed during the year :

- i Belfield Expressway from Highway 27 to Brampton
- ii QEW from Burlington to Stoney Creek
- iii QEW and Highway 403 combination between Toronto and Hamilton
- iv Highway 401 between Toronto and Oshawa
- v Highway 404 between Toronto and Newmarket
- vi Highway 407 from Highway 35 and 115 to Highway 27.

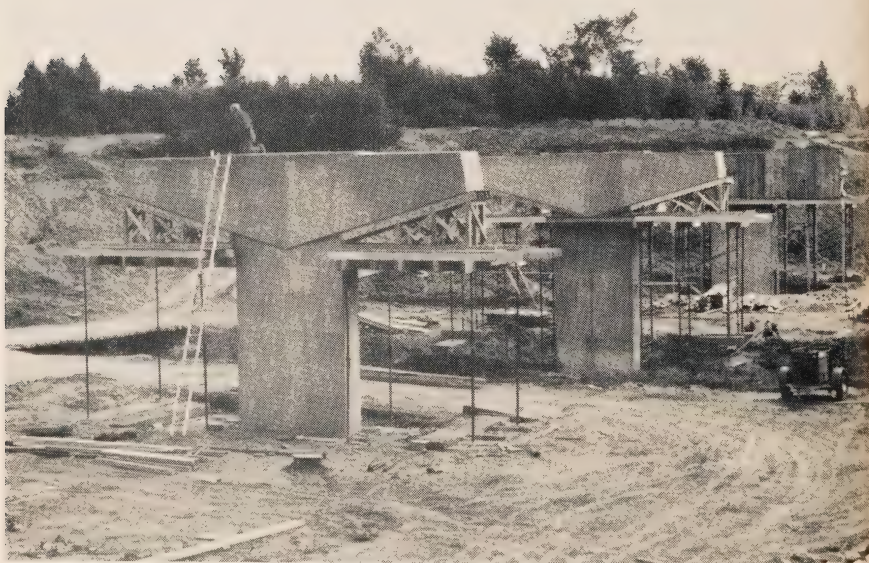
These studies provided 1985 design hourly volumes on all road sections, interchange ramps and, where necessary, by core and collector distributor lanes.

COMPUTER LIAISON AND TRAFFIC SAFETY GROUP

Computer Liaison

The liaison function handles data submitted by the Traffic and Planning Studies Office to the Electronic Computing Branch for processing.

During the year, 1500 requests were edited by this function before submission. Of these 700 were requests for planning studies and 800 were traffic volume requests.



Piers being installed for Bear Brook Bridge on Hwy 417 east of Ottawa.

Traffic Safety Program Group

The Traffic Safety Program Group was set up in April 1968 with the aim of creating a traffic accident report computer system and developing a method of locating hazardous locations on the highways.

During 1968 a computer program was written that accepts the Department's accident reports and prints out a list of these reports in a form suitable for checking.

Studies into methods of identifying hazardous locations have been made using the existing Moving Accident Rate calculation technique and methods of applying the severity of each accident to these calculations. The proposed method of identifying hazardous locations has been decided upon and it is expected that computer programming of this method will start soon.

TRAFFIC CONTROL SECTION

Requests for traffic control investigations were only slightly higher than in the fiscal year ending March 31, 1968, when the number of requests was up by 50%. Hopefully, this trend indicates a more rapid identification and correction of problem locations.

Studies Completed included Intersections 194, Speed Zoning 93, Signing Projects 358, Signals 188, Illumination 142, Others 247, totalling 1,222.

In addition, personnel of the Section attended 57 municipal meetings and 96 others such as seminars, coroners' inquests, etc.

TRAFFIC CHARACTERISTICS SECTION

In the fiscal year, Characteristics Section of Traffic and Planning Studies Office completed 1,365 requests for traffic data. This is a slight decrease from last year, mainly in the area of origin-destination surveys. In addition, numerous incidental requests were answered, including many from private individuals. Again, as in previous years, considerable amounts of traffic data were made available from the volume files to various firms of consulting engineers, planners, university research groups and students.

During the year, the Accident Records Group received and coded 32,032 accident reports and completed 661 requests for accident experience information.

The O/D Data Processing Group completed 58 origin-destination studies. Ten origin-destination studies were taken during the year consisting of 210, two-way interview stations providing 203,700 roadside interviews of which 191,679 interviews were coded in this fiscal year. Also 13,179 roadside interviews were re-coded from previous years and 25,200 interviews copied from previous years. In addition, special assignments such as plotting, and building O/D tables, etc., for the use of Planning Studies Section were completed.

The Analysts Group completed 620 volume requests for traffic information as well as analysing the computer calculated AADT's for the compilation of the Volume and Accident Data Book and volume booklet. As in past years, many incidental requests for traffic volume information were received and answered by telephone.

FUNCTIONAL PLANNING SECTION

The following Table shows a comparison of the production of this Section for the last two years :

Work Load	1967-68	1968-69
Functional reports completed	52	35
Functional reports reviewed	49	40
Functional reports in progress	151	144
Grading work projects issued	70	64
Structure projects completed	186	71
Interchanges completed (Regions)	37	22
Channelizations completed (Regions)	59	68
Work projects reviewed (Head Office)	102	213

The projects issued included some major highway proposals worthy of special note :

- The East Main Street Tunnel and Approaches, City of Welland.
- Welland Area Road and Rail Network Study.
- Hwy. No. 3 Essex Bypass.
- New Hwy. No. 7, Kitchener to the New Hamburg Diversion.

A major Urban Expressway Report, the 6.0 mile Brantford Expressway Number Two, was completed and presented to the Brantford City Council.

The Report for the Brady Street Expressway, City of Sudbury, is also nearing completion.

Some of the more significant work completions during the 1968-1969 fiscal year follow :

- A set of standards for use throughout the Department of Highways, Ontario, was produced for Geometric Design of Freeways at Ramp Terminals.
- Exhibits and films were completed for two paper presentations of Functional Planning Staff.
- “Transfer Lanes, Interchange Exits and Lane Continuity On Collector-Distributor Roads, CAH 401, Toronto” presented at the C.G.R.A. Convention October, 1968.
- “Evaluation of Complex Interchange Designs by Three Dimensional Models” presented at the Highway Research Board Convention in Washington, January 1969.
- A total of 213 work projects were reviewed by Head Office ranging from day labor jobs to freeways such as CAH 403, Toronto to Burlington.
- 150 major intersection treatments were designed or reviewed.

CENTRAL REGION FUNCTIONAL PLANNING

The following are completed projects :

1. *W.P. 240-66-1 & 2, East Main Street Tunnel and Approaches and East Main Street Relocation.*

This report proposes a four-laned divided tunnel under the relocated Welland Canal with approaches along East Main Street in Welland from Wellington Street to Highway 140. The East Main Street site was selected as the most desirable location as it is centrally located to service the City of Welland and is considered to continue as the major desired connection between Niagara Falls and Welland across the relocated Welland Canal. The estimated cost of this project is approximately \$7,582,000.

The project was unique in that close liaison not only with the normal agencies such as the Parks Dept., Agricultural Dept., Ontario Water Resources Commission, etc. was necessary, but also, and in particular, with the St. Lawrence Seaway Authority and the major rail companies in the area.

In addition, a Hearing of Necessity, the first this region had experienced, was required on this project. Court appearances, preparation of exhibits, estimates and various associated calculations were involved.

2. Welland Area Road/Rail Network Study

Due to the relocation of the Welland Canal between Port Robinson and Port Colborne, many of the existing railway lines, county roads, township roads and municipal roads in the area, were either severed and/or seriously affected.

The study area covered approximately 80 square miles and involved two counties, five townships, two cities as well as numerous small municipalities and industries. It was the responsibility of this section to review and prepare a road/rail network plan on behalf of the SLSA that would resolve the many problems and prove acceptable to all parties concerned. As a result, extremely close co-operation and liaison with the various parties affected was required.

As a result of our studies, a need for a new highway became apparent and a Functional Report for the facility was required.

SOUTHWESTERN REGION FUNCTIONAL PLANNING

1. Of the various projects undertaken during the past year, the following are worthy of special note :

- Highway 3, Essex Bypass 7.5 Miles
- Highway 3, Leamington Diversion to the Essex Bypass 9.75 miles.
- Highway 2, Woodstock to Beachville, 4.8 miles.
- Highway 3, Tillsonburg Bypass, 2.9 miles.
- Highway 7, Kitchener to New Hamburg Diversion, 9.0 miles.

The six mile Brantford Expressway Number Two, connecting Highways 2 and 53 on the west with Highway 403 on the northeast, Functional Planning Report was completed and presented to Brantford City Council. Council accepted the report and detail design work and property acquisition are presently underway.

EASTERN REGION FUNCTIONAL PLANNING

Functional Planning completed and issued 6 Functional Reports and 8 major grading work projects in this fiscal year.

Completion of all preliminary work on Highway 416 culminated in presentations being made to senior Department officials for approval of highway location, geometric and service concept, and construction program evaluation. Following approval, this same presentation was made to the various municipal councils and local authorities affected by this new freeway. The Region was able to begin a more detailed study of Highway 416 in the Ottawa area this year, which also initiated a more active role in a working committee as part of the Technical Advisory Committee for Freeways in this area.

Highway 417 from Ottawa easterly to the Quebec Border required a complete reassessment of alignment due to severe foundation problems in structure areas, discovered in the more intensive pre-engineering investigations required for this type of construction. The necessary revisions were investigated and completed in time for presentation of the complete corridor to the Quebec Border to senior officials of the Department for their approval. Consultation with the individual municipalities on this approved corridor was initiated for the portions of this approved corridor lying within their municipal boundary and will continue with completion of the individual grading projects.

On Highway 417 from Ottawa westerly to Haley's Station, extensive studies are being carried out towards a final location for this freeway in this more rugged area. One grading project within these limits has been completed for an early issue in advance of the presentation for overall corridor approval for which work is continuing.

NORTHERN REGIONAL FUNCTIONAL PLANNING

Under the guidance of a Technical Advisory Committee and consultants M. M. Dillon Limited, a Functional Study for the Brady Street Expressway, City of Sudbury, is under way.

Photo-contour plans have now been received for almost all of the arterial highways under study for ultimate development as controlled access freeways and considerable study has been carried out. In order to control adjacent development, existing controlled access criteria are being reviewed and in many areas new designations are being applied.



Rod drilling for blasting on Trans Canada, Hwy 17, near Haviland Bay in the Sault Ste. Marie area.

Design Branch

ROAD DESIGN OFFICE

During this fiscal year, the Road Design Office completed design drawings and contract documents and prepared quantity and cost estimates for 243 projects covering more than 1,100 miles of highway construction and reconstruction, which can be summarized as follows :

Grading and Drainage	8 Miles
Grading, Drainage and Granular Base	139 Miles
Grading, Drainage, Granular Base and Hot Mix Paving	315 Miles
Grading, Drainage, Granular Base and Concrete Paving	36 Miles
Hot Mix Paving	187 Miles
Asphalt Resurfacing	271 Miles
Clearing	88 Miles
Clearing, Grubbing and Fencing	59 Miles
Prime and Surface Treatment	19 Miles

In addition, designs were completed and contract documents, drawings and estimates prepared for 26 structure and approach contracts and 50 miscellaneous contracts.

Some of the major undertakings included in the above are :

1. The design of Highway 27 between Dundas Street and Bloor Street.
2. The commencement of design of the Highway 401-Highway 27 Interchange including the Richview Side Road Interchange, and the Renforth Drive Interchange.
3. The commencement of design of the Highway 417 Freeway between Ottawa and the Quebec border.
4. The commencement of design of the Highway 416 Freeway between Johnstown and Ottawa.
5. The design of the Kitchener-Waterloo Expressway was completed.
6. The design of the E.C. Row Expressway in Windsor was commenced.
7. The design of the Brantford Expressway was commenced.
8. The design of the Hanlon Expressway in Guelph was commenced.

HEAD OFFICE

Road Design Head Office comprises several sections responsible for various centralized operations.

DESIGN SERVICES ENGINEER'S SECTION

Intersection Detail Design Group, during this fiscal year, completed the detailed design of 36 channelizations and 3 cloverleafs.

Geometric Design Group completed detail designs of three interchanges and detail graphic design of one. Also made revisions in the designs of several projects in order to reduce structure of property costs. And handled the development of detail standards for freeway detours, with different median widths.

PROJECT DESIGN ENGINEER'S SECTION

The Project Review Group scrutinized 149 projects, representing more than 800 miles of highway construction.

Highways Standards Group undertook the preparation of Department Standards for inclusion in all projects.

DESIGN STUDIES ENGINEER'S SECTION

This section supplied the technical data and logic required for programs prepared by the Electronic Computing Branch, in order to fully utilize the capacity of the new 360-65 system.

PROCEDURES SECTION was responsible for the implementation of new, generally improved practices in design and estimating procedures, as well as revisions to the Design and Estimating Manuals, and for the direction and administration of a continuous training program for Road Design's technical staff.

BRIDGE OFFICE

During the past few years notable accomplishments in structure design have been realized such as: Spadina Expressway, Hwy. 401 and 27 Complex, also the Kaministiquia and Seine River Crossings in Northern Ontario.

The Spadina Interchange Bridges, in particular, put Ontario some ten years ahead of all other jurisdictions in North America and stimulated a great deal of favorable comment. They are currently being imitated in all the more progressive states of the U.S.A.

The work of the Bridge Office is subdivided into the Bridge Planning, Bridge Design, Bridge Control and Municipal Bridge Sections.

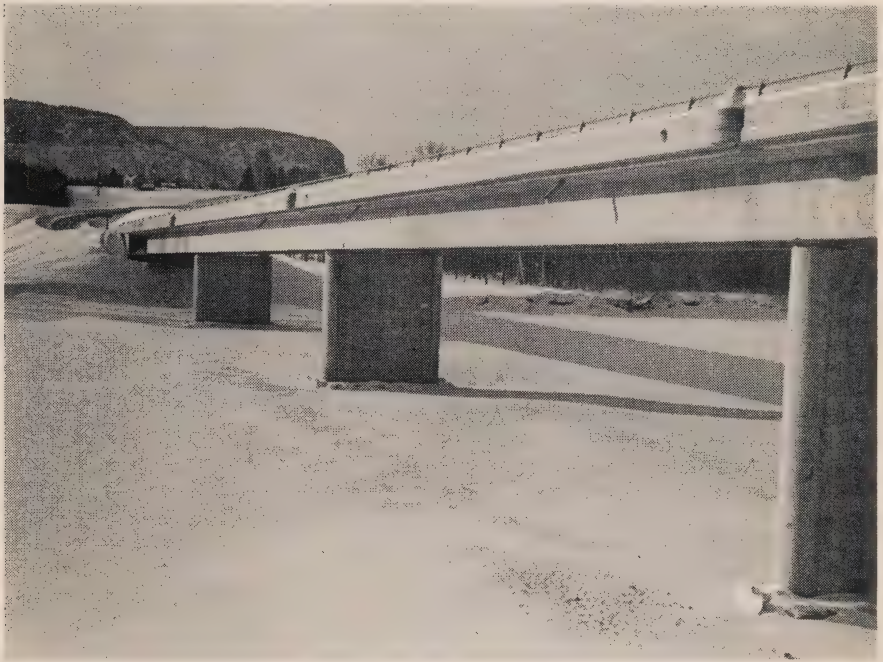
BRIDGE PLANNING SECTION

During the year, studies were made and reports prepared for 90 proposed bridge sites on King's Highways. Bridge planning reports covering 66 sites were prepared and submitted for design purposes. Complete data for 14 special design culverts were also processed for design.

In addition, studies were carried out on 24 municipal bridges. Complete hydrological investigations and reports were prepared on 31 proposed bridge sites.

To keep pace with the increase in vehicular traffic, and the rapid growth of urban development in the southern and eastern areas of Ontario, a need for construction of major highway facilities was realized. As a result, an extensive program for these areas has been planned. Some of the more significant projects currently in the planning stages are shown below :

- (A) E.C. Row Expressway, City of Windsor.
- (B) Hanlon Expressway, City of Guelph.
- (C) Brantford South Expressway
- (D) Hwy 402, Sarnia to London Freeway.
- (E) Hwy 417, Ottawa S.E. Limits easterly to Quebec Boundary.
- (F) Hwy 416, from Hwy 401 northerly to Ottawa S. Limits.



The Kaministikwia (or Kam) Bridge over the river of that name on the Lakehead Expressway illustrates the sophisticated and at the same time practical approach of DHO designers.

BRIDGE DESIGN SECTION

Following is a breakdown of the structures designed during the fiscal year:

Bridges Designed	97*
Retaining Walls designed	6
Standard Culverts	190
Special Design Culverts	56
Overhead Truss Sign Supports	99

Types of Structures

Prestressed Precast Beam	24
Post-tensioned	34
Structural Steel	12
Reinforced Concrete	12
Timber	4
Structural Plate Pipe Arch	11
Total	97

*This includes East Main Street Tunnel, under Welland Canal at Welland.

BRIDGE CONTROL SECTION

The Bridge Contract Engineer prepared 170 D4 estimates and special provisions for structure contracts for a total value of \$32,859,997.00.

The Materials Control Office prepared 1,059 purchasing requisitions for materials to be supplied by the Department with a value of \$3,500,000.00. These requisitions cover a wide variety of material, including 15,300 tons of reinforcing steel, 140,000 lineal feet of piling and 89,400 lineal feet of bridge hand railing.

Arrangements were also made to have these materials inspected by private companies specializing in this work.

Technicians of the Control Section provided quality control inspection on all precast, prestressed beams manufactured for the Department as well as those for a large number of Municipal contracts. Engineers of the section continued their liaison with District field staff on all phases of bridge construction and particularly in checking and inspection of falsework.

During the year shop drawings were reviewed for 8 structural steel contracts. Two of these contracts were carried over from the previous year. A total of 878 tons of structure steel was erected during this period.

MUNICIPAL BRIDGE SECTION

All Municipal structures subsidized by the Department of Highways are reviewed by the Municipal Bridge Section to ensure public safety, to reduce costs and to increase the life of structures by means of recommended improvements to design.

The following submissions were approved:

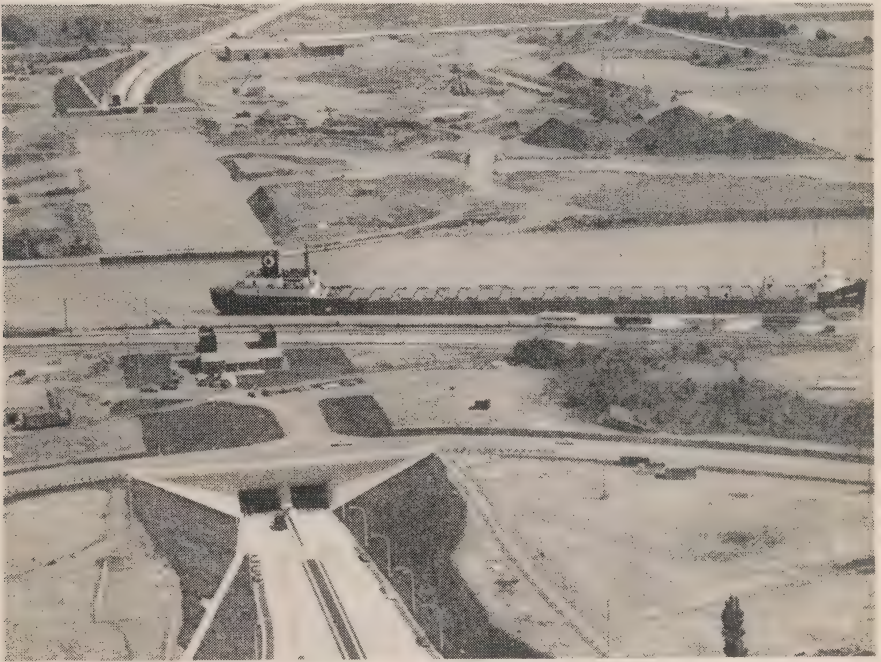
Preliminary Plans	227
Final Bridge Plans	295
Culvert Plans	330
Miscellaneous Buildings and Walls	58
Prestressed Concrete Shop Drawings	81

During the year 59 field hydrology investigations and 123 river catchment studies were made. These involved problems pertaining to river restrictions, ice jams and alignment. There were 261 site inspections of old bridges for maintenance and planning purposes. In conjunction with the Ontario Department of Transport, 72 load restriction by-laws were reviewed.

ENGINEERING SURVEYS OFFICE

The Engineering Surveys Office is responsible for all the field survey engineering work and plan preparation work for the Planning and Design Branches in all but the North-western Region, as well as to establish Vertical Control (Precise Levels) and Horizontal Control (Co-ordinate Control) on a Province-wide basis. Other responsibilities, besides work for the current and future pre-construction program, are pre-engineering surveys and plans of existing highways and secondary highways for pre-planning and general use ; special surveys and drawings for other associated Branches and Offices ; preparation and distribution of Strip Maps, updating of existing plans and drawings in regard to property limits, buildings and utilities ; and the training of draftsmen and technicians within the office.

This year, some 1,100 miles of surveys, 1,000 miles of plans, 78 bridge site plans, 41 railway crossing plans and other associated surveys and plans were completed.



An aerial view of the tunnel under the Welland Canal at Thorold. A DHO project undertaken in cooperation with the St. Lawrence Seaway Authority.

PHOTOGRAMMETRY

Photogrammetry—the science of making measurements from photographs—continues to be an invaluable tool for the highway engineer.

Salient developments :

- the total staff complement of this Office increased slightly to 58.
- training programs resulted in five trainees successfully completing examinations hereby enabling them to enter the junior journeyman level of activity.
- this Office purchased a new Zeiss Planimat Stereoplotter. This precision instrument, in conjunction with "in-house" electronic digitizing equipment, represents a major step towards the automation of the photogrammetric process.
- visitors to this Office, primarily from academic institutions, increased over previous years (400 plus).
- plans were finalized to extend our Regional Photogrammetrist to the Northwestern Region in August, 1969.
- outside agencies exhibited considerable more interest in the activities of this Office—private, provincial, national and international agencies.

Examining each one of the sections within this Office individually :

Interpretation and Studies—Head Office and Regional Sections

It is the responsibility of these sections to prepare, through photographic interpretation techniques ; area studies, drainage and hydrology studies, line locations, mosaics, photo plans, etc.

Head Office and Regional staff carried out a total of 165 drainage studies, covering 3,063 square miles, and 12 hydrology studies, covering 543 square miles.

Photographic investigations were carried out on eight projects for proposed new alignments, covering 1,769 square miles, and some 283 line miles of proposed locations were projected for this purpose.

Six area studies were carried out using photo interpretive techniques to cover a total area of 3,506 square miles.

A total of 86 mosaics, covering an area of 6,707 square miles, were produced at various scales ranging from 100' to 1" to 1,320' to 1". As a secondary stage, three projects were enlarged to 200' to 1" and the corresponding report sheets were prepared for Functional Planning purposes.

These sections also completed other various studies such as : ditching studies, tree species investigations, soil and land classification, construction problem studies, etc.

Stereoplotting and Control—Head Office

It is the responsibility of this section to perform precision photogrammetric instrumentation and related activities in order to produce required 200' to 1" plans, 40' to 1" plans and cross sections.

A considerable volume of stereoplotting activity for this Department is processed by private photogrammetric consultants—a further responsibility of this section being to provide the necessary quality and quantity controls for this work done by our consultants.

Production activity included : (these figures include the activity processed by our consultants)

- 200' to 1" plans with 5' contours used primarily for Functional Planning activity covering a total area of 221,167 acres.

- 41' to 1" plans with 2' contours used for Road Design and related activities covering a total area of 13,359 acres.

Other production activity involved the use of electronic digitizing equipment for taking original cross sections and digitizing graphical studies in connection with the Traffic Office and Electronic Computing Branch.

Drafting—Head Office

This section is responsible for the photogrammetric and cartographic drafting activity relating to this Department.

The Photogrammetry Drafting group processed the required drafting on the 57 photogrammetric plans prepared by the Stereoplotting and Control Section.

The 400' to 1" study plan coverage of Highway 401 was completed this year with the compilation of six linens, covering 209,280 acres. This completed the project Quebec-Windsor, thereby superseding many older plans.



The primary task of DHO is the building of highways. It also constructs culverts like this gigantic drain pipe on Hwy 24 near Stayner.

The Cartographic Drafting group revised and had printed the following 4 mile to 1" county maps:—

- (a) Dufferin, Huron, Perth, Waterloo and Wellington
- (b) Nipissing South
- (c) Prescott and Russell, Stormont, Dundas and Glengarry
- (d) Brant, Elgin, Middlesex, Norfolk and Oxford
- (e) Renfrew

Cronaflexes were revised of county and district maps for new highways, new county and municipal limits at a scale of 1 mile to 1" and 2 miles to 1".

The 1969 Official Road Map bases were prepared to show all revisions in preparation for printing. All printed matter was proof read, and all stages of the printing were edited.

Photographic Library—Head Office

During this year, 20,443 contact aerial photographs and 879 glass plate diapositives were ordered and processed for the general and specific use of this Department. 998 photographs were replaced by more up-to-date photography.

Electronic Computing Branch

The Electronic Computing Branch's main effort during the fiscal year 1968-1969 was directed toward conversion of all computer applications from the 7044, 1460 and 1401 equipment to the IBM System/360 Model 65. The new third generation computer was installed early in April 1968. By July all of the work being processed by the 7044 computer was channelled to the new System. Major programming work was devoted to the straight conversion of some programs (primarily in the engineering area) and the complete redesign of the existing systems (primarily in the commercial area).

Design Branch

- Conversion of all Bridge Program to /360
- Expansion of the function of all Bridge programs
- Geometric Design of Highway Interchanges
- Road Design System
- Three-Dimensional Analytical Triangulation
- Digitized Magnetic Tape Translator

Financial Branch

- Budget Office Reports
- Expenditure Detail Package
- Unclassified Payroll
- Cash Disbursement Account No. 1

Operations Branch

- Concrete Quality Control-Accelerated Strength Tests
- Geometric Analysis of Highway Interchanges for Construction Layout
- Winter Maintenance Optimization
- Conversion to /360 of all Foundation programs on Slope Stability and Stress Analysis (6 Programs)

Planning Branch

- New Transportation Planning Systems Package:
- Road Transportation Planning Systems (20 programs)
- Public Transportation System (13 programs)
- Traffic Data Bank System (6 programs)
- Traffic County System (5 programs)
- O/D Surveys Analysis System (6 programs)
- Accident Analysis and Retrieval (6 programs)

Research Branch

Maintenance Management Reporting Program Package
 Truck Weight Statistical Analysis-frequency table added
 Maintenance Management Resource Allocation
 Construction Analysis and Staff Evaluation

Services Branch

Equipment System
 Conversion to /360 and expansion of the Land Surveys System

Management

1050 Data Communication System Applications Development
 Management Information Systems (pre-engineering)
 Predicting Expenditures on Construction projects
 Code Standards on Construction Items
 Critical Path Method
 Multivariate Analysis Program Package
 Contract Bid Analysis
 Progress Payment Certificates

Personnel Branch

Employee Merit Increase Program

Department of Civil Service

Pay Research Data Analysis-1966 data
 Development of a Proposal for a Personnel Resources System

Department of Attorney-General

Labour Disputes Inquiry

Department of Agriculture

Winter Wheat Analysis

Ontario Provincial Police

OPP Listing Program

Department of Energy and Resources Management

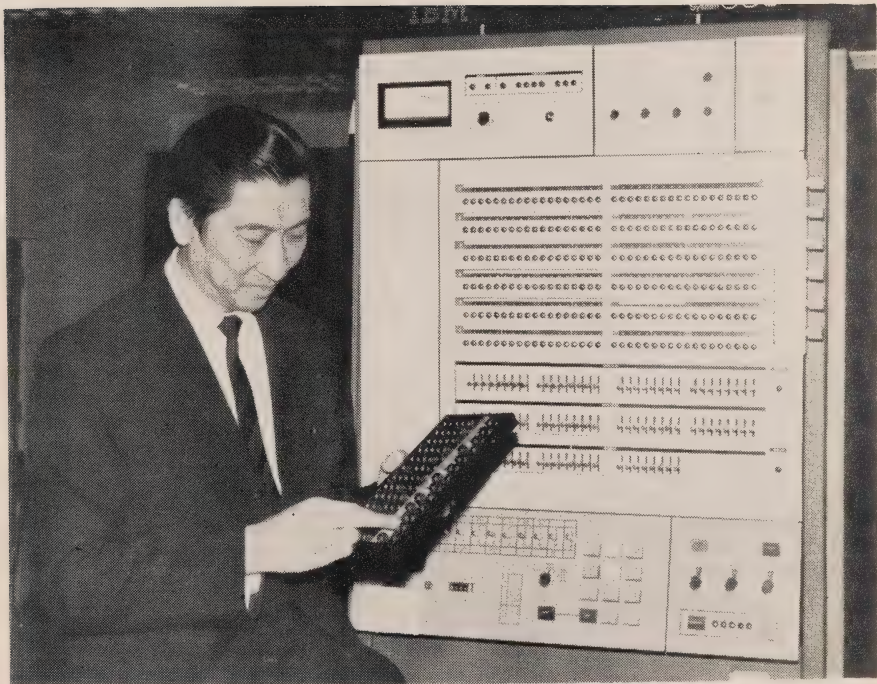
Ontario Well Data System—modified

Significant Applications in Production for Fiscal Year 1968-69

Job Description	Miles Jobs	
Bridge Calculation—all types	5,009	
Land Survey Calculation—all types	658	
Geometrics-Azimuth Distance and Ramp Coordinates	348	
Progress Payment Certificates	80	
Staff Resources Inventory Reports	41	
Critical Path Reports	785	
Photogrammetry Reports and Plots	253	
Road Design Quantity Calculation	429	63
Road Design Elevation and Alignment Reports	196	42
Road Design Cross Section Plots	228	63
Operations Cross Section Plots	225	47
Office Services Inventory Reports		565
Slope Stability Design		597

Significant Application Continued.

Equipment Analysis and Reports	37
Planning and Project Scheduling Reports	347
Transportation Study and Origin Destination Surveys	801
Hourly Traffic Counts	769
Personnel Reports	435
Accounts—various	1,367
Traffic Characteristics Reports	65
Employee Suggestion Program Reports	42
Maintenance Management Reports	46
Estimating Division Reports	44
Concrete Quality Analysis Reports	202
Financial Branch	25



A senior analyst programmer in ECB compares the ancient calculator called an abacus with DHO's gigantic 360-65 computer.

Program Office

ADVANCE PROGRAM SECTION

During 1968-69, 500 new work projects, to a total value of \$71 million, were added to the advance construction program. Twenty covered ordinary resurfacing, the remainder capital works. The Brantford South and Hanlon (Guelph) Expressways are good examples of major projects programmed in 1968.

For various reasons, during the course of a fiscal year it becomes necessary to change the content of work programs by addition and deletion of projects. During 1968-69, 47 projects valued at \$9.5 million were added to the current program, while 56 with a total value of \$27.0 million were deleted. As each item of change would have repercussions throughout the entire advance program, the sum total of changes considered, accepted and documented, was counted in the hundreds.

The Construction Program for 1969-70 was prepared in book form for distribution in connection with the budget presentation of the Department's estimates. In addition several hundred special reports were prepared for the Minister and his senior staff, Cabinet Ministers and MPPs, Municipal Councils, etc. Monthly reports on the Status of the Capital Construction Program were prepared and distributed within the Department.

The Highway, Structure and Level Crossing Inventories were continuously updated. The two last were published in book form April 1st, 1968.

URBAN PROGRAM SECTION

Road works within an urban municipality may be financed jointly by the Department and the municipality under normal connecting link agreement or special agreement. The Department, committed to a major share of the cost, claims the right to approve the work proposed by the municipality. The Urban Program Section scrutinizes and approves such projects through all stages, from inception to contract award, ensuring that the work is kept in line with Departmental standards and policies, taking care that only items eligible for subsidy are charged to the Department.

Ninety projects, to a total value \$27.5 million, were processed by the Section during 1968-69. The Department's contribution under the various connecting link agreements was \$13.2 million. The remaining \$14.3 million represented the municipal share of costs and municipal subsidies under Part X of the Highway Improvement Act.

SCHEDULING SECTION

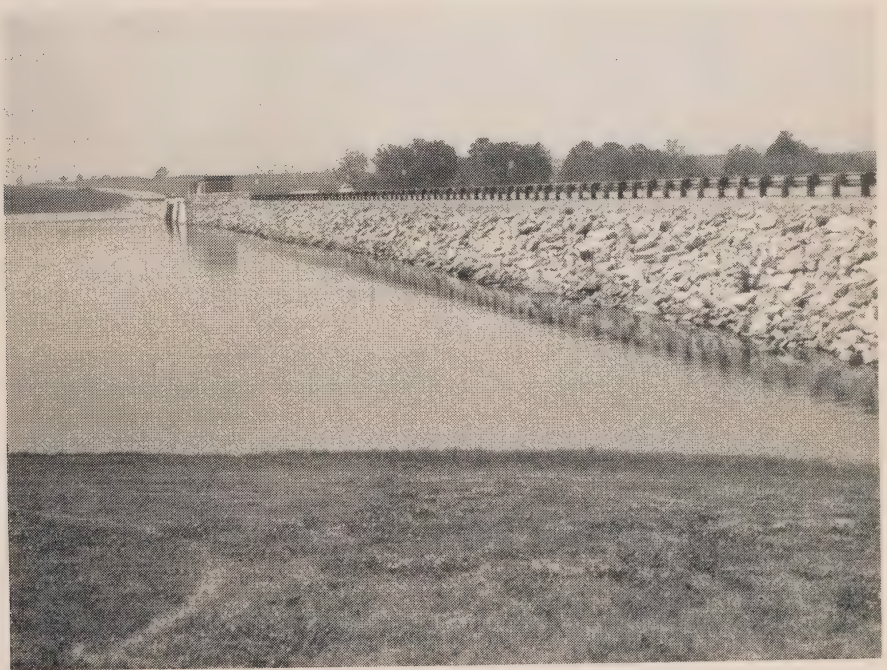
The Scheduling Section arranges pre-engineering, advertising and award schedules for the Construction Division Capital Program. Liaison is maintained with other concerned offices so that all efforts are co-ordinated and an up-to-date record is kept of the status of the various projects, enabling schedules to be adjusted as required.

Records are also kept of the status of active contracts, including disbursement and/or commitment of construction funds. Any need to regulate the rate of commitment, in order to keep disbursements reasonably aligned with available funds, is thus continually in view. Adjustment of the residual award schedule constitutes the necessary budget control.

During the course of designing a major work which is to be awarded in segments, a critical path scheme is prepared on the basis of quantities, feasible work splits and anticipated availability of funds. In the case of individual contracts, a preliminary staging scheme takes into account quantities and work load levels on the basis of recent experience on similar projects. The comments of all concerned on the preliminary scheme provide criteria for a final critical path analysis which is included in "advice to bidders." This analysis is updated monthly during the course of the contract, to reflect progress and project the probable completion date, in relation to interim and final dates previously established.

A current investigation is examining the further computerization of critical path methods to bring about economy of time and money. Utilization of information from monthly critical path updates, in future budget control, is also in view.

A Management Information System of pre-engineering now being developed should produce a realistic and functional automatic system for scheduling work projects in the design phase. The end result is expected to be automatic Contract Award and Budget Control.



Wildwood Dam on the St. Mary's diversion of Highway 7 near Stratford.

SPECIAL STUDIES SECTION

During 1968-69, the activities of the Special Studies group continued broad and varied, in the general field of economic and statistical analysis and research, as related to highway planning and administration.

The possibility of freeway-bus service between Toronto and Barrie, via Highway 400, as an alternative to GO rail Transit, was investigated. The resultant report, "Interchange Parking Area Facilities and Freeway-Bus Transit Service", recommended provision of suitable park-and-ride lots near selected interchanges which would serve bus transit operations and car-pool pick-ups.

Further progress was made on the continuing study to determine the various deleterious effects of freeway shoulder and right-of-way occupancy.

Operations

CONSTRUCTION DIVISION

During the year ending March 31, 1969, construction continued at the busy pace of the past several years, and by the year's end, construction expenditures compared closely with those of the immediate past years.

Considerable emphasis was placed on several major projects underway for some time, including Trans-Provincial Highway 401, Kitchener-Waterloo Expressway, Lakehead Expressway, Queen Elizabeth Way reconstruction, and Highway 403. Highway 401 was completed as a divided highway across the province with the last section east of Gananoque opened as a dual highway in the Fall of 1968. On the Toronto Bypass section of Highway 401, and on the Queen Elizabeth Way and Highway 27 portion of the bypass, a large amount of heavy intricate work was carried out. Work on the Kitchener-Waterloo Expressway progressed well. Reconstruction of the Queen Elizabeth Way in the form of widening, new interchanges, flyovers and service roads proceeded well during the year. Progress on Highway 403 was such that the opening to public travel was expected by early Fall of 1968.

In Northern Ontario favorable progress was made on the new highway from Sudbury to Timmins, Highway 144, while work on the Lakehead Expressway was concentrated at the north and south ends of the project.

There was, in addition to the very large projects, the reconstruction of various main and secondary highways and the building of a large number of new structures across the Province. This work was well distributed and all sections of the Province received the benefit of new and improved highways and newly built bridges.

SUMMARY OF NEW SECTIONS OF KING'S HIGHWAYS

Completed During Fiscal Year 1968-69

New 4-Lane Highways

Hwy. No.	Location	Miles
2	Hwy. 401 to Duff's Corners	1.00
4	Hwy. 401 southerly—	2.00
26 & 27	North of Barrie	4.40
7	Peterborough easterly.	0.50
8	Stoney Creek	5.94
401	East of Gananoque easterly	16.00
	Total	29.84

New 2-Lane

27	Schomberg Diversion	3.69
144	North of Benny	8.00
144	North of Gogama	25.00
Sec. Hwy. 631	South of Hornepayne southerly	21.30
Sec. Hwy. 651	Dalton southerly	8.00
Lakehead Expressway	From Hwy. 17 easterly to Tert. Road 800	6.81
Lakehead Expressway	From Hwy. 61 to Broadway Avenue	0.76
	Total	73.56

NEW BRIDGES COMPLETED

During the fiscal year 81 new bridges were completed.



QEW and Hwy 27 Interchange under construction.

TABLE SHOWING TOTALS OF WORK DONE

Class of Work	No.	Tons	Miles
Automatic Signals at Railway Crossings	10		
Bituminous Hot Mix Pavement		1,417,322.00	380.51
Bituminous Mulch and Cold Mix		62,082.00	827.28
Bituminous Prime on Gravel Roads Gals.	2,282,891		
Bituminous Resurfacing Old Pavement		270,638.00	626.56
Bituminous Surface Treatment Gals.	1,737,503		
Bridges Built	81		
Bridges Painted	111		
Calcium Dust Layer—Gravel Roads		9,158.00	663.00
Calcium for De-Icing Roads			
Concrete Base Pavement, Asphalt Top.		124,570.00	7.20
Concrete Pavement		209,570.00 (sq. yds).	10.52
Crushed Gravel and Stone (by Contract)		8,631,609.00	1,114.92
Crushed Gravel and Stone (by Dept. Forces)		543,751.24	5,560.06
Grading and Culverts			447.62
Granular Base on New Grading		11,965,044.47	494.78
Granular Base on Old Grading		1,235,708.00	332.07
New Buildings Erected This Year	34		
Off-Road Parks Maintained	221		
Roads Snowplowed and Kept Open (King's Hwys.)			11,381.54
Roads Snowplowed and Kept Open (Secondary Hwys.)			3,173.37
Roadside Picnic Places Maintained	646		
Routine Maintenance (King's Hwys.)			11,355.54
Routine Maintenance (Secondary Hwys.)			3,179.37
Salt for De-Icing Roads (Raw)		239,922.11	
Salt in Sand, Stockpiled		41,030.15	
Sand for Winter Maintenance		818,131.11	
Scale Houses Maintained	45		
Seeding by Department Forces Acre	2,610.25		
Shrubs Received and Planted	44,313		
Signs Newly Erected or Replaced	94,240		
Snow Hedges Planted this Year			4.00
Snow Fence Erected, Dismantled, Stored.			560.03
Traffic Lights Installed this Year	59		
Weed Control			14,196.00
Zone Painting (King's Hwys. and Sec. Hwys. Gals.	204,037		12,045.00
Development Roads Built.			24
Buildings erected	31		

SOUTHWESTERN AREA

Chatham, London, Stratford and Owen Sound Districts

During 1968 further progress was made in the elimination of grade crossings on the Macdonald- Cartier Freeway. Six underpasses were completed in Essex County and a start made on all remaining underpasses in the Chatham District. One underpass was completed in the London District, and four others are under construction.

With the completion of the final contract on Highway 3 between Port Crewe and Ouvry, this road has now been reconstructed between Blenheim and Wheatley. Resurfacing from Shedden to Iona, was completed for a distance of 3.4 miles.

On Highway 4 paving from .3 miles north of Highway 401 southerly for 2 miles was completed. Grading, granular base, paving, and a structure at Kettle Creek were started from .1 mile south of east junction of Highways 3 and 4, southerly for .3 miles. Construction is under way from Hanover to Walkerton ; this includes a structure over the railway east of Walkerton.

The Lynn River structure in Port Dover on Highway 6 and grading, granular base and paving for a distance of .51 miles was started. A large rock excavation and grading job was completed from Wiarton northerly for 6.7 miles.

On Highway 7, grading, drainage, granular base and hot mix paving were completed from 6.5 miles south of Stratford southerly for 11.38 miles. Construction continued on the St. Marys Diversion.

Grading, drainage, granular base and hot mix paving on Highways 7 and 8 at the intersection of Waterloo County Road 7 and New Hamburg Diversion were completed providing much improved traffic turning movement.

On Highway 9 construction is well advanced on two structures over the Teeswater River and Formosa Creek.

Work was completed on Highway 21 from Forest south to junction of Highway 7, a distance of 7.93 miles ; this included the reconstruction of a township bridge over Hickory Creek. A new structure, over Pine River, southwest of Kincardine was completed.

Work was completed on Highway 23 from Newry to Listowel. Paving on the Boyle Drain structure and approaches, 2.5 miles north of Monkton, was finished.

Work of curve widening at three locations on Highway 24 between Hespeler and Guelph was completed by invitation bid.

On Highways 26 and 27, deep strength paving was completed from Highway 400 northerly to Midhurst, also a four-lane structure over Willow Creek. Singing median was used throughout the length of the contract.

A new diversion on Highway 27 was completed and opened to traffic, including a structure over the Schomberg River north of the junction of Highways 9 and 27.

On Highway 59, except for the top course, paving work was finished from Long Point Park entrance westerly for 2.4 miles.

Top course paving and two structures over the Maitland River on Highway 86 (Wingham Diversion) east and west of Highway 4 were completed. Grading, drainage, granular base and structure at Smith Creek is under way.

On Highway 89 construction from .15 miles south of Highway 87 southerly for 4.09 miles has commenced.

Resurfacing on Highway 400 from .3 miles south of Highway 89 southerly for 10.9 miles of southbound lanes only was completed.

The underpass on Highway 402 at Murphy Road in Sarnia was completed.

CENTRAL AREA

Toronto, Hamilton and Port Hope

On the Macdonald-Cartier Freeway, with the completion of the sections from the Don River to Warden Avenue and from Kipling Avenue to West of Dixon Road, 15.8 miles of the Toronto Bypass were open to travel, on the most heavily travelled section of highway in Canada.

Construction of five bridges at the Interchange of Highway 401 and Highway 27 which is the first phase of the reconstruction of the complete interchange, was completed. When completed the interchange will have 30 bridges and approximately 29 miles of two-lane pavement.

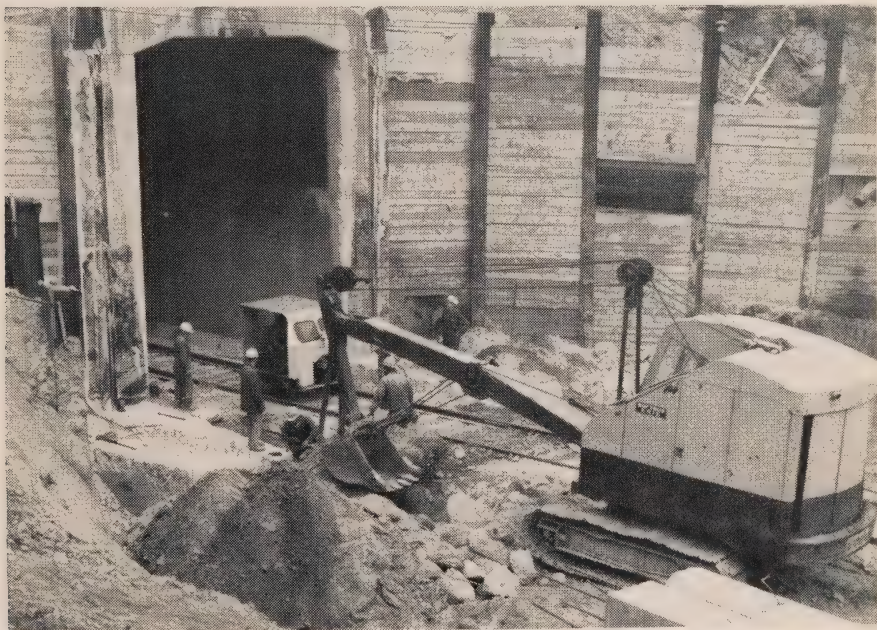
On the Queen Elizabeth Way, resurfacing was finished from the Burlington Street Interchange to Grimsby West limits and from Vineland to the Garden City Skyway. A contract for widening to six lanes from the Ninth Line to Kerr Street in the Town of Oakville was awarded. Service road construction got under way from Lake Avenue in Hamilton to Roberts Road in Grimsby and from Thirteenth Street to Seventh Street in Louth Township. A very large contract for the new Interchange at Highway 27 was started, and work progressed favorably. This was the second large contract at this interchange.

Work on the Kitchener-Waterloo Expressway continued on schedule with the award of another section of Highway from Frederick Street to north of Bridgeport Road. In addition to the Guelph Street structure, a section of the expressway from King Street to Frederick Street was finished.

At Paris on Highway 2, a new structure over the Grand River, was completed and a contract for the relocation of the Lake Erie and Northern Railway subway was awarded. A minor channelization in Burlington was completed. In Trenton, a structure and approaches over the Trent River were finished, as were the grading, drainage, granular base and hot mix paving from Ontario Street to .1 mile east of Bowmanville east limits including structures at Soper Creek East and Soper Creek West. Grading, drainage, granular base and hot mix paving from Oshawa east limits easterly for .42 miles were finished.

Resurfacing and minor grade revisions on Highway 3 from the east end of Canborough diversion northerly to Canborough were completed. Widening to four lanes from Ridgeway to Gasline began and is expected to be completed in 1969. Grading, drainage and paving of Highways 3 and 6 in Jarvis were finished.

A five-mile section of Highway 6 was awarded for grading and paving from Highway 5 northerly. A 5.5 -mile section of grading, drainage, granular base, hot mix paving including a structure from Aberfoyle southerly was completed.



Work proceeds on the Trans Canada (Highway 17) 69 miles east of Mattawa.

On Highway 7, grading, drainage, granular base and hot mix paving from Peterborough easterly for 7.5 miles were finished. Grading, drainage, granular base and hot mix paving were completed on Highway 7A from Bethany easterly to Highway 115, a distance of 5.8 miles. On Highways 7B and 35, grading, drainage, granular base and hot mix paving on intersections at Lindsay, County Road 9 and a curve revision South of Cameron began.

Reconstruction of Highway 8 from Highway 20 to Winona was completed.

The contract for the construction of Highway 9 across the Holland Marsh was awarded and all the swamp excavation and backfill was completed during the winter.

Widening to four lanes on Highway 10 from Highway 401 northerly to Brampton is progressing on schedule.

Resurfacing on Highway 24 was completed from Paris to Galt.

The reconstruction of Highway 27 between the Queen Elizabeth Way and the Macdonald-Cartier Freeway continued with the completion of a storm sewer that reached a maximum size of ten feet and which runs for a distance of approximately 8,000 feet. The completion of this storm sewer permitted the awarding of a contract for the reconstruction of Highway 27 from the Canadian Pacific Railway crossing South of Highway 5 to a point a half-mile north of Bloor Street. A total value of \$17-million and a tender value of \$12-million makes this the largest value road contract ever awarded by the Department.

On Highway 30, approaches covering 1.7 miles and a structure over the Canal at Trent River were finished. Resurfacing from Highway 7 southerly to County Road 25B, excluding the Village of Trent River and the Town of Campbellford, a distance of 15.71 miles, was completed.

In the Village of Hastings on Highway 45, Trent River Bridge, Headrace Bridge and approaches were completed.

On Highway 49, construction of new concrete pavement from 3.6 miles south of Roblin Mills to .1 miles south of Picton north limits, a distance of 4.5 miles began.

A new bridge and approaches were constructed at Kenny Creek on Highway 53 near Burford.

The Thorold Tunnel and 1.25 miles of Highway 58 from Collier Road to the West portal were completed, and opened to travel in September, 1968. Work commenced on the complex interchange at Highway 406 and St. Davids Road in St. Catharines.

Reconstruction of the interchange at Highway 400 and Finch Avenue is progressing on schedule.

On Highway 403, a grading and structure contract was completed from Mohawk Road to the Highway 2 Interchange and construction was completed from Highway 2 westerly to Duffs' Corners. The Toronto, Hamilton and Buffalo Railway subway was finished and two granular base and paving contracts were started from Aberdeen interchange to the Highway 2 interchange, a distance of approximately 6 miles.

Work was started on the Stanley Avenue interchange on Highway 405, in the City of Niagara Falls.

On Highway 507, grading, drainage, granular base and hot mix paving were finished from Highway 28 northerly for 6.3 miles.

On Highway 17 resurfacing was finished from Calabogie Corner to Renfrew, a distance of 9.9 miles.

Grading, drainage, and granular base on Highway 38 was completed between Sharbot Lake and Tichborne.

On Highway 41 grading was carried out from Denbigh northerly for 5.1 miles. Paving was finished from Northbrook northerly for 7.92 miles.

A grading contract on Highway 42 consisting mainly of curve realignment and drainage revision between Delta and Soperton was completed.

On Highway 43 grading, placing of cement stabilized granular base and hot mix paving from Highway 31 westerly for 7.2 miles commenced.

Grading was completed on Highway 60 from 8.7 miles east of Algonquin Park Station Road easterly for 7.27 miles. This is the final link in the reconstruction of the highway through the Provincial Park.

On Highway 62, paving from Combermere westerly to Purdy a distance of 5.5 miles was finished. Grading from .2 miles south of Highway 620 northerly for 9.24 miles was completed.

On Highway 127 a prestressed bridge over Papineau Creek South near Maynooth was completed and opened to traffic.

A contract for the reconstruction of Highway 138 from St. Andrews to Monkland was awarded.

On Highway 416, clearing was completed on the Spencerville Bypass and a grading contract including a structure over the South Nation River was awarded and is progressing favorably.

EASTERN AREA

Kingston, Ottawa and Bancroft Districts

On the Macdonald- Cartier Freeway, two paving contracts, on the section between Highway 137 and Highway 2 West of Brockville were completed. Thus the final sixteen miles of four lanes in the entire 510-mile Freeway, were open to traffic. Mitchell's Road grade separation, 4.8 miles east of Highway 37 was finished, eliminating a hazardous at-grade intersection.

La Rue Mills Road grade separation, 14.7 miles east of junction of Highway 2 at Gananoque was completed, as was the Fraser Road underpass, west of Lancaster. At two other structure locations, repairs were carried out using Hot Mix H.L.-1, Asbestos Modified, to alleviate deck deterioration. Work on the nine-mile road interchange was started.

On Highway 2, a structure replacement 1.9 miles west of Marysville, and a grade revision, 2.5 miles west of Marysville were completed. The channelization of the Moulinette Road and the easterly entrance to the Long Sault Parkway were finished. Hoople Creek structure was repaired, waterproofed and resurfaced, and the intersection of Highway 2 and Avenmore Road was improved.

On Highway 7, on the Trans-Canada Highway, resurfacing from Perth to Innisville with repairs and waterproofing on the Mississippi River Bridge at Innisville were carried out. Clearing between Marmora and the Madoc Bypass was completed, making ready 8.6 miles for reconstruction. Resurfacing began from Hawkesbury to Pointe Fortune ; included in this contract are the repairs and waterproofing of the two structures at Highway 34 and the structure at the Little Rideau Creek.

The reconstruction of Highway 16 from the Manotick Bypass to 2 miles south of North Gower was completed.



Bridge construction south of Gogoma.

On the Ottawa Queensway Extension Highway 417, three structures at Acres Road, Moodie Drive and the Canadian National Overhead near Bells Corners were completed except for minor trim work. A major grading and drainage contract from the junction of Highways 7 and 15 westerly to .59 miles East of County Road #9, a distance of 5.5 miles was started, well ahead of schedule. The Blair Road Interchange on the Ottawa Queensway was finished.

On Highway 500 a prestressed bridge over the York River, 6 miles east of Bancroft was completed and opened to traffic.

A structural steel bridge on Highway 515 over the Madawaska River at Jewellville was finished and opened to traffic.

NORTHERN AREA

Huntsville, Sault Ste. Marie, Sudbury, North Bay and New Liskeard Districts

On Highway 11, a contract for 4.2 miles of a new four-lane section which will bypass Gravenhurst to the east, including an overpass at each of the interchanges at the north and south limits, also twin structures at the Gull Lake Crossing was awarded with the completion expected late in 1970. Resurfacing was carried out from the north junction of Highway 592 to Novar, a distance of 9.44 miles.

Grading and hot mix paving on Highway 11 B from 4 miles north of Latchford northerly for 7.31 miles were completed. Grading and hot mix paving from the intersection of Highway 567 northerly to New Liskeard south limits, (excluding the town of Haileybury) were finished. Grading, drainage, granular base, hot mix paving and a structure over the Wabi River were started.

The Trans-Canada Highway 17 with grade revisions and realignments from 8 miles west of Bruce Mines westerly 6.68 miles was brought up to Trans-Canada standards.

On Highway 17, hot mix paving from the junction of Highway 606 westerly 4.90 miles and from 1.5 miles west of the junction of Highway 68 westerly 10.25 miles, was finished. This included a 4-lane section through Webbwood. Hot mix paving and frost heave treatment were completed from 3.8 miles east of the junction of Highway 108 westerly 15.0 miles. Work commenced on grading, drainage, granular base and structure (Aumond Creek) 9.2 miles east of Mattawa easterly 11.1 miles.

Grading on Highway 35 from 7.7 miles south of Highway 118 at Dorset, southerly for 8.6 miles, is near completion, and the new structure at Ox Lake Narrows was opened to traffic. Grading from 3.7 miles north of Norland northerly for 4.4 miles, including two structures at Moore Falls, is progressing ahead of schedule.

On Highway 63 from North Bay City limits easterly for 2.46 miles, grading, drainage, granular base, hot mix paving and a three-span overhead bridge over the Ontario Northland Railway were completed. A contract covering grading, drainage, granular base and hot mix paving from 2.46 miles east of North Bay, easterly to Feronia, a distance of 4.4 miles, was finished.

On Highway 64 at Holdridge Creek, 13.8 miles north of Highway 539 at Field, replacement of a small structure is underway.

Grading, drainage and granular base on Highway 65 from 1 mile west of Kenabeek, westerly for 8.4 miles, started in late Fall.

On Highway 66, work began on grading, drainage, granular base and a structure over the Englehart River a distance of 2 miles from 11.1 miles west of Highway 11, westerly.

Grading, drainage and granular base on Highway 67 were completed from Highway 610 to Highway 101, a distance of 5.9 miles.

Highway 68 (Manitoulin Island) is being reconstructed from 4.6 miles South of Sheguiandah southerly for 7.39 miles.

Grading and hot mix paving on Highway 69 from 1.7 miles east of Gravenhurst west limits, northwesterly for 8.3 miles were completed. Grading, drainage and granular base from Bala southerly for 6.9 miles is underway and upon completion, the entire length of Highway 69 between Gravenhurst and Bala will have been reconstructed. Grading, drainage, granular base and hot mix paving has been started from Hanmer to Capreol, a distance of 3.70 miles. Several truck climbing lanes are under construction in various locations south of Sudbury.

Highway 101, from the south junction of Highway 129 westerly for 41.6 miles, was double surface treated, and an additional 26.2 miles received a lift of bituminous hot mix pavement. Grading and hot mix paving from Foleyet to 14.6 miles westerly, and grading and hot mix paving from Highway 576 westerly for 10.54 miles were completed. Grading, drainage, granular base and hot mix paving from Mattagami River Bridge to Ontario Northland Railway subway, a distance of 1.1 miles.

Grading, drainage and granular base on Highway 118 from Baysville westerly for 4.9 miles and grading and hot mix paving from the south junction of Highway 11 to the Muskoka River Bridge in Bracebridge, were completed.

Paving on Highway 124 from 3.2 miles west of the east junction of Highway 320 westerly for 1.4 miles was finished. Grading from Highway 69 easterly for 4.2 miles is underway.

On Highway 129, grading, drainage and granular base from Chapleau southerly for 6.96 miles, including a new structure over the Nebskwaski River were completed. From 1.8 miles south of the south junction of Highways 101 and 129 southerly for 9.10 miles was reconstructed including major re-alignment and grade revisions.

On Highway 144, grading, drainage, granular base and hot mix paving were finished from Belanger Street (Azilda) westerly for 7.15 miles, including a 4-lane portion around Chelmsford. Work on the new Sudbury-to-Timmins section of Highway 144 is now extended to 24 miles north of Benny with the completion of 8 miles of grading, drainage and granular base. Granular base course was placed from Highway 101 southerly for 16.25 miles. A major grading contract from 51 to 60 miles north of Benny including connection to Highway 560 was almost completed. In the late Fall, a grading, drainage and granular base contract from 42.54 miles north of Benny northerly for 8.86 miles was also awarded.

A new structure has been built over the Drag River in Haliburton on Highway 519.

On Highway 520, grading and hot mix paving over 1.4 miles and a new structure over the Distress River were finished.

Grading, drainage, granular base and hot mix paving on Highway 543 from Sudbury City limits southerly for 4.70 miles are presently underway, and involves the construction of a rock causeway across the east end of Song Lake, as well as a 4-lane curb and gutter portion on the north end.

On Highway 551, grading, drainage and granular base from 2.8 miles north of Highway 542 northerly were finished; this greatly improved the alignment and bypasses a dangerous grade called Dunlop Hill.

Highway 614 from the junction of Highway 17 northerly for 12.2 miles was reconstructed.

Grading, drainage, granular base and a structure over the Blanche River on Highway 624 are under construction.

A contract for grading, drainage and granular base was awarded on Highway 629, from 1.3 miles south of Timmins north limits to Timmins Airport, in the late Fall.

Highway 651 was constructed from 9 miles north of Highway 101 northerly for 7.97 miles including structures over the Windermere River and Ogasiwi Creek. With the completion of this portion, the highway from Highway 101 northerly to Dalton, Missinabie and Renabie Mine was opened to the public.

NORTHWESTERN AREA

Cochrane, Fort William and Kenora Districts

The section of the Lakehead Expressway from Highway 17A to Tertiary Road 800, although not entirely finished was temporarily opened to traffic in the Fall. Another section opened to traffic was the section from Highway 61 to Broadway Avenue. This included a structure

of 654 feet in length over the Kaministiquia River. Construction of this bridge was a substantial engineering accomplishment incorporating some features unique to the District and Province. The construction included pre-tensioned concrete piles, fabricated locally, and an extensive post-tension concrete deck.

On Highway 11, grading, drainage, granular base and hot mix paving from 5.5 miles south of Beardmore southerly for 7.3 miles were finished. Resurfacing was carried out from Opasatika to Mattice, a distance of 19.59 miles. Four short sections which were subject to severe frost heaves each year were treated with styrofoam as an experiment in reducing this condition. Grading was carried out in Mattice to correct base failures in this area.

Resurfacing between 20 miles and 33 miles west of Hearst began.

Grading, drainage, granular base and hot mix paving on Highways 11A and 17A from 9.6 miles east of Sistonen's Corners easterly for 4.92 miles were completed.

On Highway 17, from 1.8 miles west of Savanne westerly to 1 mile east of Upsala, reconstruction of 9.66 miles, involving grading, drainage, granular base and hot mix paving was finished. The grading and paving from 2.11 miles east of Borups Corners westerly for 11.22 miles were almost complete by the end of the construction season.

On Highway 71, paving was completed from 9 miles south of Nestor Falls southerly for 9.1 miles. Grading was finished from 17 miles north of Nestor Falls northerly for 7.97 miles and grading a further 8.92 miles from Nestor Falls northerly was started.

The reconstruction and paving of Highway 72 from the junction of Highway 17 to the junction of Highway 116, a distance of 37 miles were finished.

On Highway 128, construction began on the structure and approaches of the Moon Bridge over the Black Sturgeon River.

Grading, drainage and granular base on Highway 631 from 6.72 miles south of Hornepayne to 28 miles southerly including structures at Shekak River and West Beaton River were finished.

MAINTENANCE OFFICE

Department's Crushing Plant

The Department crusher, working in the Kenora District, produced 92,800 tons of ¾-in. crushed gravel of which 31,595 tons were placed directly on King's Highways and Secondary Highways, with the remainder being stockpiled for future maintenance requirements.

Mulch Pavement

Bituminous mulch pavement, mixed and laid by Department forces totalled 36 miles in seven districts.

Zone Painting

The Department had 22 paint strippers in operation this year, 15 dual and 7 single machines, which painted centre line marking on 12,045 miles of King's and Secondary Highways. In addition, yellow paint was applied along the pavement edge for a total of 2,828 miles.

The zone striper replacement program continued with North Bay and Sault Ste. Marie Districts each receiving a new dual striping unit as replacements for old single units. This year all districts changed over to the use of the 6-in. fluorescent blaze-orange plastic cones for protecting traffic paint until dry.

Signs

During the year, District forces manufactured and erected 94,240 signs including various types of signs from fingerboards, curve and stop signs to the large cantilever and overhead extruded aluminum guide signs.

Winter Maintenance

The winter of 1968-69 was one of the mildest experienced for some time in the province. There was less plowing than normal and the 775,000 tons of abrasives and 268,000 tons of de-icing chemical used in our winter maintenance operations were considerably below the average of past years.



Repaving Highway 3 south of approach to Ambassador Bridge at Huron Church Line and Tecumseh Rd.

The program of reducing or preventing contamination of soil and ground waters in the vicinity of winter sand and salt stockpiles, continued this year with the construction of a newly designed storage dome at Emsdale in the Huntsville District. This brought the total number of such structures to four. In addition to the sand domes, during this year 15 sand bins were built as an alternate method of preventing salt contamination. These bins were considerably less costly to construct than the sand domes but experience to date indicates they are less effective in preventing contamination and will possibly be more expensive over a period of years.

Maintenance Management System

The Maintenance Management Study that began in May of 1965 terminated in December, 1968, at which time the maintenance management system was fully operational. New quality standards and operating procedures were developed and introduced. The benefits of the system are measurable and can be expected to expand as the system develops.

Forestry and Landscape

Grass seeding operations covered a total 22,700,084 square yards. Day labor forces accounted for 12,461,548 square yards. Work accomplished by contract totalled 10,238,536 square yards.

Herbicide application for the control of weeds and brush covered 14,196 miles. 17,524 gallons of selective herbicide were used, supplemented with 50,935 pounds of T.C.A. for the control of evergreen brush. A total of 3,436 pounds of soil sterilant chemicals were used in areas around guide rails, sign posts and tree growth. Thickening agents to control snow drifting were used for the first time on an operational basis.

The planting of 48,128 trees and shrubs was carried out in 16 districts under the roadside improvement program. Accent was placed on landscaping and screening of patrol sites, and rehabilitation of snow hedge areas. The planting plan for the remaining section of Highway 401, Gananoque to Brockville, was initiated.

The southern districts accomplished the removal of 15,377 dead and dangerous trees. Utility companies were issued permits for the removal of 669 trees adjacent to their installations. District forestry crews accounted for the removal of 11,025 trees. Maintenance contracts were called for the removal of 3,683 trees in six districts.

Inspection and Maintenance of Bridges

During 1968 approximately 1500 bridges on main highways and secondary roads were inspected by the staff of the Bridge Maintenance Section. District engineers were advised if repairs were required and when load restriction signs should be posted.

Waterproofing of bridge decks was continued with the application of a membrane consisting of rubberized mastic or emulsified asphalt.

Rockfilled gabion baskets were installed at several structures throughout the province, for the retention of unstable fill slopes, prevention of scour or as foundations for supplementary span supports.

A novel installation of gabion abutment and wingwalls at the Porcupine River Bridge on Highway 101 in New Liskeard District was made by district forces. The structure has self-supporting cantilevered end spans and as such was not constructed with the usual abutments and wingwalls for support and retention of approach fill, however a problem existed with the instability of the approaches and continual pavement settlement. The gabions now function as retaining walls and provide the needed soil support.

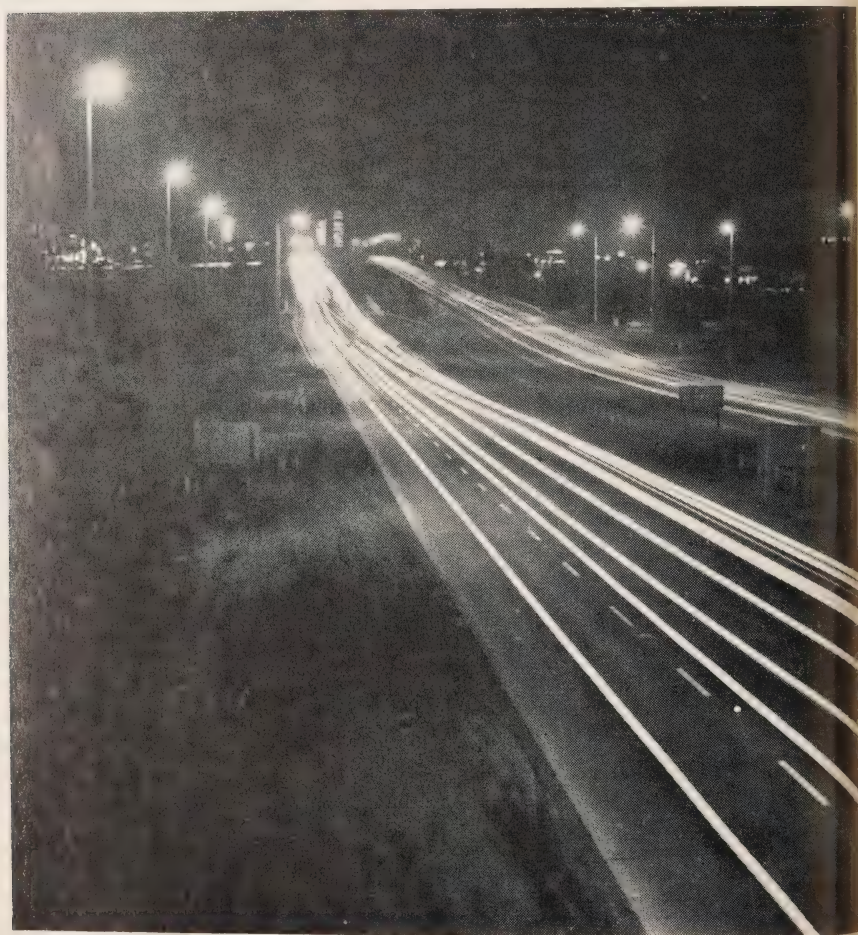
The section designed approximately 14 temporary detour structures consisting of Bailey bridges. Two pedestrian Bailey overpasses were constructed, the Bloor Street Overpass being temporary and the structure over the C.N.R. tracks for GO Transit was built on a semi-permanent basis. An additional 45 Bailey bridges were designed or checked by this section and built by district day labor or municipal forces for indefinite use as replacements or reinforcing for faulty existing structures. Several Bailey bridges were installed in the Fort William vicinity following washouts on secondary highways.

Major steel repairs were made on the Big Pic and Chalk River Bridges on Highway 17 and on the Pagwachuan River Bridge on Highway 11. Structural steel contractors were required to perform the work while maintaining limited one lane traffic.

Painting of 42 bridges and 40,000 lineal feet of handrails was completed. Of these, 17 bridges and 10,000 lineal feet of handrail were done by district forces. Continuing with the experimental program, an additional 7,000 lineal feet of handrail was metallized with zinc.

Highway Lighting and Signals

During the year 6,473 highway lighting fixtures were installed with major installations on the Ottawa Queensway (1,222 units) and the Thorold Tunnel (3,102 units). Traffic signals were installed at 55 intersections and flashing signals at 71. Lighting was provided for signs at 37 locations and automatic signals were installed at 10 railway crossings.



Lighting along QEW, looking east toward Metropolitan Toronto.

Construction by Highways 1968-69

*For total mileage
of individual highways
as of March 31, 1969
see Appendix No. 7*

HIGHWAY 2—WINDSOR TO QUEBEC BOUNDARY

Location	Type of work	Miles or jobs completed this fiscal year
Approaches to Grand River Bridge	Grading, culverts, granular base	Completed
As above	Crushed gravel and stone	0.02
Washington St, Paris, easterly excluding Grand River Bridge	Grading, culverts, granular base, bituminous paving	Completed
Grand River Bridge, Paris	Bridge	Completed
LE&N Railway underpass, Paris	Underpass	Completed
.5m E. of Hamilton Dr to Hwy 2 & Duff's Corners	Grading, culverts, granular base, bituminous paving	2.46 (completed)
Hwy 403, Ancaster	2 overpasses	Completed
N. Shore Blvd, Burlington	Grading, culverts, granular base, bituminous paving	.38 (completed)
Oshawa E. limits easterly	Grading, culverts, granular base, bituminous paving	.42 (completed)
Ontario St to Bowmanville E. limits	As above	1.28 (completed)
Soper Creek, W. Branch, Bowmanville	Bridge	Completed
Soper Creek, E. Branch, Bowmanville	Bridge	Completed
CPR Overhead from Port Hope E. limits easterly 1.1m	Grading, culverts, granular base, bituminous paving	Partially completed
Trent River & Canal, Trenton	Bridge, granular base	Completed
Salmon River Bridge & Detour, Shannonville	Grading, culverts, granular base, bituminous paving	Completed
1.9 & 2.5 Miles W. of Marysville	Grading, culverts, granular base, bituminous paving	1.03
Marysville Creek	Bridge	Completed
1.7m W. of Hwy 38 to .35m E. of Kingston W. limits	Grading, culverts, granular base, bituminous paving	Partially completed
Long Sault	As above	Completed

HIGHWAY 3—WINDSOR TO FORT ERIE

Location	Type of work	Miles or jobs completed this fiscal year
0.7m E. of Hwy 114	Culvert replacement	41% completed
9.7m W. of Blenheim W. limits westerly	Grading and culverts	5 (completed)
Shedden westerly 3.4m to Iona	Grading, culverts, granular base	3.4 (completed)
1.2m W. of Hwy 24 at Simcoe	Grading, culverts, granular base, bituminous paving	0.30 (completed)
Hwy 6 at Jarvis	Grading, culverts, granular base, bituminous paving	1.81 (completed)
Canboro Diversion easterly	As above	.40 (completed)
6.7m W. of Ft. Erie westerly	As above less paving	Partially completed

HIGHWAY 4—PORT STANLEY TO FLESHERTON

Location	Type of work	Miles or jobs completed this fiscal year
.1m S. of E. jct of Hwy 3, southerly	Grading, culverts, bridge, granular base	Partially completed
.3m N. of Hwy 401, southerly	Grading, culverts, granular base, bridge, bituminous paving	Completed
Formosa Creek	Grading, culverts, granular base, bridge	Partially completed

HIGHWAY 5—TORONTO TO PARIS

Location	Type of work	Miles or jobs completed this fiscal year
.57m E. of Hwy 27 to .54m W. of Hwy 27	Granular base, bituminous paving	Partially completed

HIGHWAY 6—PORT DOVER TO TOBERMORY

Location	Type of work	Miles or jobs completed this fiscal year
Lynn River, Port Dover	Grading, granular base, bridge and approaches	Partially completed
Wiarton northerly	Grading, culverts, granular base	6.65
6.4m N. of Wiarton to 14m N.	Bituminous prime	7.6

HIGHWAY 7—OTTAWA TO SARNIA

Location	Type of work	Miles or jobs completed this fiscal year
Interchange at Hwys 15 & 17	Bridge, granular base, bituminous paving	1.78 (completed)
.2m S. of Hwy 43 northerly 7.79m & .6m S. of Mississippi R. northerly .99m	Grading, culverts, granular base, bituminous paving	8.78 (completed)
E. & W. of Peterborough Bypass, 7.54 m	Grading, culverts, granular base, bituminous paving	7.54 (completed)
Bethany easterly to Hwy 115, including intersection at County Rd 10	Grading, culverts, granular base, bituminous paving	6.20 (completed)
Duffins Creek	Bridge	
3m E. of Hwy 48 (Little Rouge R.)	Grading, bridge, bituminous paving	Completed
Intersection Waterloo County Rd 7 & New Hamburg Bypass	Grading, culverts, granular base, bituminous paving	.21 (completed)
6.5m S. of Stratford W. limits westerly	Grading, culverts, granular base, bituminous paving	8.08 (completed)
St. Marys Bypass including CNR overhead 3m W. of Hwy 19	Grading, culverts, bridge, granular base, bituminous paving	11.07 (completed, except part paving)
W. end St. Marys Bypass westerly to Elgin-field, including Medway Creek bridge	Grading, culverts, bridge, granular base, bituminous paving	5.81 (completed)

HIGHWAY 8—NIAGARA FALLS TO GODERICH

Location	Type of work	Miles or jobs completed this fiscal year
Winona Side Rd to Stoney Creek	Grading, culverts, granular base, bituminous paving	5.94 (completed)
Clinton W. limits to Goderich E. limits	Bituminous surface treatment	10.3

HIGHWAY 9—NEWMARKET TO KINCARDINE

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 400 westerly 3.7m	Bituminous prime	3.7
Hwy 400 W. to Hwy 27	Crushed gravel and stone	.5
Intersection Hwy 27 at Schomberg	Grading, culverts, granular base, bituminous paving	3.69 (completed)
Teeswater R. Bridge, Riversdale	Grading, culverts, bridge, granular base	Partially completed

HIGHWAY 10—PORT CREDIT TO OWEN SOUND

Location	Type of work	Miles or jobs completed this fiscal year
Etobicoke Creek	Bridge	Completed
2.5m S. of Caledon northerly to .2m S. of Orangeville and Hwy 9 from Hwy 10 easterly .9m	Grading, culverts, granular base, bituminous paving	9.37 (completed)
Rocky Saugeen structure, 10m N. of Markdale	As above	.9 (completed)

HIGHWAY 11—TORONTO TO RAINY RIVER

Location	Type of work	Miles or jobs completed this fiscal year
.37m S. of jct of Hwy 69 northerly	Grading, culverts, granular base, bituminous paving	.42m (completed)
Northern jct of Hwy 592 southerly to Novar	Granular base, bituminous resurfacing	9.44 (completed)
Jct Hwy 17	Bituminous paving (storage lane)	Completed
Jct Hwy 567 northerly to jct Hwys 11B & 65	Grading, culverts, crushed gravel and stone	5.46
New Liskeard S. limits northerly to jct of Hwys 11B & 65	Bituminous paving	1.18
N. jct. of 11B northerly	Crushed gravel and stone	3.33
Jct Hwy 112 to jct Hwy 66 (various locations)	Grading, culverts, crushed gravel and stone, bituminous paving	.3
Opasatika E. limits westerly to Mattice W. limits	Bituminous paving	19.59
Jct Hwy 631 westerly to Fraser R.	Bituminous surface treatment	14

5.5m S. of Beardmore, southerly	Grading, culverts, granular base, bituminous paving	7.3
8.45m N. of jct of Hwy 17 to Nipigon	Bituminous paving	8.45
(11A) Jct Hwys 11 & 17 easterly	Grading, culverts, bituminous prime	9.6 (completed)
31m W. of jct Hwy 17 westerly	Bituminous surface treatment	20

HIGHWAY 16—JOHNSTOWN TO OTTAWA

Location	Type of work	Miles or jobs completed this fiscal year
1m S. of North Gower northerly to Manotick Bypass	Grading, culverts, granular base	5.78

HIGHWAY 17—QUEBEC BOUNDARY TO MANITOBA BOUNDARY

Location	Type of work	Miles or jobs completed this fiscal year
Blair Rd interchange	Grading, culverts, crushed gravel and stone, bituminous paving	2.76 (completed)
W. of jct of County Rd 9 at South March	Grading, culverts, granular base, bituminous paving	.21 (completed)
(Old 17) Kinburn, Antrim & Galetta	As above	2.80 (completed)
Aumond Creek, 10m W. of Deux Rivières	Bridge	Completed
9.2m E. of Mattawa, easterly	Grading, culverts, granular base	10.1
2.8m E. of jct of Hwy 536	Bituminous paving	.3
1.5m W. of jct of Hwy 68 westerly	Grading, culverts, granular base, bituminous paving	10.25
3.8m E. of Hwy 108 westerly	Granular base, bituminous paving	14.67
8m W. of Bruce Mines westerly; intersection improvement at Hwy 638	Grading, culverts, granular base, bituminous paving	6.68
Hwys 17, 101 & 547, Wawa area	Grading, culverts, granular base, bituminous paving	26.20
.1m W. of Hwy 628 westerly	Bituminous paving	12.90
Hwy 800 easterly to Blind Creek	Grading and culverts	2
Lakehead Expressway, Hwy 17A easterly to Hwy 800	Grading, culverts, granular base, bituminous paving	Partially completed
Lakehead Expressway—Kaministiquia River	Bridge	Completed
Lakehead Expressway, jct Hwy 61 northerly	Grading, culverts, granular base, bituminous paving	Partially completed
Jct Hwy 11 westerly	Granular base	Partially completed
Current River	Bridge	Completed
1.8m W. of Savanne R. westerly	Grading, culverts, granular base, bituminous paving	Partially completed
2.11m E. of Borups, Cors. westerly	As above	Partially completed

HIGHWAY 18—LEAMINGTON TO WINDSOR

Location	Type of work	Miles or jobs completed this fiscal year
Kingsville westerly (18A)	Bituminous surface treatment	18.9
Marantette Drain, .2m S. of LaSalle	Grading, culvert replacement, granular base, bituminous paving	.11 (completed)

HIGHWAY 21—MORPETH TO OWEN SOUND

Location	Type of work	Miles or jobs completed this fiscal year
Jct of Hwy 7 northerly to Forest	Grading, culverts, granular base, bituminous paving	7.93 (completed)
Pine River, 4.6m N. of Hwy 86	Grading, bridge, granular base	Completed

HIGHWAY 23—HIGHWAY 7 TO TEVIOTDALE

Location	Type of work	Miles or jobs completed this fiscal year
15.6m N. of Mitchell northerly to Listowel including Patrol Yard and Maitland R. Bridge No. 2 Burnett Drain	Grading, culverts, bridge, granular base, bituminous paving	6.78 (completed)
2.5m N. of Monkton (Boyle Drain)	Bituminous paving	.25 (completed)

HIGHWAY 24—PORT DOVER TO COLLINGWOOD

Location	Type of work	Miles or jobs completed this fiscal year
(24T) Connection at Waterford between Hwy 24 and new Hwy 24	Grading, railway underpass, granular base, bituminous paving	2.4 (completed)
Paris to Galt	Resurfacing	4.11
3 locations between Hespeler and Guelph, curve widening	Granular base, bituminous paving	Completed

HIGHWAY 25—BURLINGTON TO ACTON

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 24 southerly	Bituminous prime	5.5

HIGHWAY 26—BARRIE TO OWEN SOUND

Location	Type of work	Miles or jobs completed this fiscal year
Barrie to Midhurst Cors.	Grading, culverts, Willow Creek Bridge, granular base, bituminous paving	4.4 (completed)

HIGHWAY 27—HIGHWAY 2 TO PENETANGUISHENE

Location	Type of work	Miles or jobs completed this fiscal year
Evans Avenue	Underpass, East Ramp, West Ramp	Completed
Queen Elizabeth Way intersection	Five Bridges, overpass	Completed
N. Queen St.	Overpass	Completed
Canadian Pacific Rly	Overpass	Completed
From CPR to .43m N. of Bloor St.	Granular base, bituminous paving	Partially completed
.32m S. of Dixon Rd interchange northerly 2.15m	Grading, culverts, granular base, bituminous paving	Completed
Schomberg River	Bridge	Completed

HIGHWAY 28—PORT HOPE TO BANCROFT

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 36 northerly 16.8m	Granular base, bituminous paving	16.8 (completed)
9.1m N. of Hwy 504 northerly	Grading, culverts, granular base	Partially completed

HIGHWAY 30—BRIGHTON TO HAVELOCK

Location	Type of work	Miles or jobs completed this fiscal year
Trent River	Grading, culverts, Bridge, granular base, bituminous paving	1.11 (completed)
County Rd 25B to Hwy 7	Granular base, bituminous paving	15.71 (completed)

HIGHWAY 31—MORRISBURG TO OTTAWA

Location	Type of work	Miles or jobs completed this fiscal year
Hess Creek, N. of Williamsburg	Bituminous paving	.88 (completed)

HIGHWAY 35—HIGHWAY 401 TO DWIGHT

Location	Type of work	Miles or jobs completed this fiscal year
3.7m N. of Ncrland, northerly	Grading, culverts, granular base	Partially completed
Minden southerly	Crushed gravel and stone	4
7.7m S. of Dorset, southerly	Grading, culverts, bridge, granular base	8.57

HIGHWAY 37—BELLEVILLE TO ACTINOLITE

Location	Type of work	Miles or jobs completed this fiscal year
Moirs R. northerly, Plainfield, Latta Sideroad	Granular base, bituminous paving	6.46 (completed)

HIGHWAY 38—HIGHWAY 2 TO HIGHWAY 7

Location	Type of work	Miles or jobs completed this fiscal year
Tichborne to Sharbot Lake	Grading, culverts, granular base	7.36 (completed)

HIGHWAY 41—NAPANEE TO PEMBROKE

Location	Type of work	Miles or jobs completed this fiscal year
Northbrook to 1.8m N. of Cloyne	Granular base, bituminous paving	7.92 (completed)
Village of Cloyne	Grading and culverts	.42 (completed)
Denbigh northerly	Grading, culverts, granular base, bituminous prime	5.10 (completed)
2.34m S. of Hwy 132	Grading, culverts, granular base	.14 (completed)

HIGHWAY 42—FORTHTON TO WESTPORT

Location	Type of work	Miles or jobs completed this fiscal year
Athens westerly	Grading, culverts, granular base	5.8 (completed)

HIGHWAY 43—ALEXANDRIA TO PERTH

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 31 westerly	Grading, culverts, granular base, bituminous paving	5.79

HIGHWAY 44—HIGHWAY 17 TO ALMONTE

Location	Type of work	Miles or jobs completed this fiscal year
Carp to Hwy 29	Crushed gravel and stone	11

HIGHWAY 45—COBOURG TO NORWOOD

Location	Type of work	Miles or jobs completed this fiscal year
Village of Hastings	Trent R. and Headrace bridges, grading, culverts, granular base, bituminous paving	Completed

HIGHWAY 48—HIGHWAY 401 TO HIGHWAY 46

Location	Type of work	Miles or jobs completed this fiscal year
Pefferlaw Brook Bridge	Grading, culverts, bituminous paving	Completed

HIGHWAY 49—PICTON TO HIGHWAY 401

Location	Type of work	Miles or jobs completed this fiscal year
Picton northerly 4.50m	Grading, culverts, crushed gravel and stone	Partially completed

HIGHWAY 52—HIGHWAY 2 TO WENTWORTH COUNTY LINE

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 8 to 2m N. of Hwy 97	Bituminous surface treatment	7.1

HIGHWAY 53—HIGHWAY 20 TO EASTWOOD

Location	Type of work	Miles or jobs completed this fiscal year
Kenny Creek Bridge, Burford	Grading, culverts, bridge, granular base, bituminous paving	Completed

HIGHWAY 54—CAYUGA TO CAINSVILLE

Location	Type of work	Miles or jobs completed this fiscal year
Caledonia to Hwy 2 at Cainsville	Bituminous surface treatment	12.6

HIGHWAY 58—PORT COLBORNE TO ST. CATHARINES

Location	Type of work	Miles or jobs completed this fiscal year
(58 & 406) Beaver Dams Rd to St. Davids Rd.	Grading, culverts, granular base, concrete and bituminous pavement, 2 bridges	Partially completed
Hwy 20 to Thorold Stone Rd	Grading, culverts, granular base, concrete and bituminous paving and resurfacing, 2 bridges	Partially completed
Collier Rd to Thorold Tunnel	Crushed gravel and stone, bituminous paving	Completed
Thorold Tunnel & E. Approach	Crushed gravel and stone, concrete and bituminous paving, tunnel	Completed

HIGHWAY 59—LONG POINT PARK TO SHAKESPEARE

Location	Type of work	Miles or jobs completed this fiscal year
Long Point Park entrance westerly 2.4m	Grading, culverts, granular base	Partially completed

HIGHWAY 60—HIGHWAY 17 TO HIGHWAY 11B

Location	Type of work	Miles or jobs completed this fiscal year
Village of Madawaska	Grading, culverts, granular base	Completed
8.7m E. of Algonquin Pk. Stn. Rd. easterly	Grading, culverts, granular base	Completed

HIGHWAY 62—HIGHWAY 14 TO QUEBEC BOUNDARY

Location	Type of work	Miles or jobs completed this fiscal year
.2m S. of Hwy 620 northerly	Grading, culverts, granular base	9.24 (completed)
Maple Leaf easterly	As above	6.48 (completed)
Purdy to Combermere	Granular base, bituminous paving	5.50 (completed)
Village of Combermere	Grading and culverts	.48
Combermere to Wilno	Granular base, bituminous resurfacing	17.88 (completed)
N. of Round Lake Centre	Granular base, bituminous paving	1.4

HIGHWAY 63—NORTH BAY TO OTTAWA RIVER BRIDGE

Location	Type of work	Miles or jobs completed this fiscal year
2.46m E. of North Bay to Feronia	Grading, culverts, granular base, bituminous paving	4.44 (completed)
North Bay easterly	Crushed gravel and stone, bituminous paving	2.46 (completed)
Feronia northerly—sections	Bituminous prime	2.1

HIGHWAY 64—HIGHWAY 69 TO HIGHWAY 11

Location	Type of work	Miles or jobs completed this fiscal year
Noelville easterly—sections	Bituminous prime	13.8
Sturgeon Falls northerly	Grading, culverts, granular base	2 (completed)
Field to Marten River—sections	Bituminous prime	17.4

HIGHWAY 65—QUEBEC BOUNDARY TO MATACHEWAN

Location	Type of work	Miles or jobs completed this fiscal year
New Liskeard westerly	Resurfacing	1.2
1.6m W. of Hwy 562 westerly	Bituminous surface treatment	.9
1.1m E. of Elk Lake easterly	Bituminous surface treatment	2.6
Elk Lake easterly	Bituminous resurfacing	.5
Jct Hwy 66	Crushed gravel and stone	

HIGHWAY 66—QUEBEC BOUNDARY TO HIGHWAY 65

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 westerly	Bituminous resurfacing	2.6
11.1m W. of Hwy 11 westerly	Grading, culverts, granular base	1.99 (completed)
Jct Hwy 65 easterly	Granular base	4.50

HIGHWAY 67—IROQUOIS FALLS TO HIGHWAY 101

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 610 to Hwy 101	Grading, culverts, granular base	5.9 (completed)

HIGHWAY 68—SOUTH BAYMOUTH TO HIGHWAY 17

Location	Type of work	Miles or jobs completed this fiscal year
South Baymouth northerly	Bituminous prime	13
4.6m S. of Sheguiandah southerly	Crushed gravel and stone	1.5

HIGHWAY 69—HIGHWAY 12 TO CAPREOL

Location	Type of work	Miles or jobs completed this fiscal year
1.7m E. of Gravenhurst northerly	Grading, culverts, granular base, bituminous paving	8.32
9.5m N. of jct of Hwy 11 northerly	Grading and culverts	.5
Jct Hwy 532 (deceleration lane)	Grading, culverts, granular base, bituminous paving	.1 (completed)
Jct Hwy 518 (deceleration lane)	As above	.1 (completed)
(Old 69) Pioneer Rd.	Bituminous prime	1
(Old 69) Sudbury southerly to Algonquin Rd	Granular base	1.3
.2m N. of Hanmer northerly to .7m N. of Capreol S. limits	Grading and culverts	

HIGHWAY 71—FORT FRANCES TO LONGBOW CORNERS

Location	Type of work	Miles or jobs completed this fiscal year
9m S. of Nestor Falls southerly	Granular base, bituminous paving	Partially completed
Nestor Falls northerly	Grading, culverts, granular base	Partially completed
17m N. of Nestor Falls northerly	Grading, culverts, granular base	7.97 (completed)
Berry Creek Bridge	Granular base	

HIGHWAY 72—DINORWIC TO SIOUX LOOKOUT

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 17 northerly	Grading, culverts, granular base, bituminous paving	25.84 (completed)
Jct Hwy 116 southerly	Granular base, bituminous paving	11.22 (completed)
Sioux Lookout (CNR underpass)	Bituminous resurfacing	

HIGHWAY 77—LEAMINGTON TO HIGHWAY 401

Location	Type of work	Miles or jobs completed this fiscal year
Village of Comber	Bituminous resurfacing	.9

HIGHWAY 86—HIGHWAY 7 TO AMBERLEY

Location	Type of work	Miles or jobs completed this fiscal year
Wellesley Twp	Bituminous surface treatment	5.7
E. & W. of Hwy 4 including 2 bridges	Bituminous paving	1.83

HIGHWAY 95—HORNE'S POINT TO WOLFE ISLAND

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 96 to Horne's Pt.	Bituminous surface treatment	7.1

HIGHWAY 96—QUEBEC HEAD TO WEST END OF WOLFE ISLAND

Location	Type of work	Miles or jobs completed this fiscal year
Wolfe Island Village westerly	Bituminous surface treatment	3.5

HIGHWAY 98—BLENHEIM TO WINDSOR

Location	Type of work	Miles or jobs completed this fiscal year
1.3 and 1.9m W. of Hwy 77	Culvert replacements	Completed
.1m E. of Hwy 114	Culvert replacement	Completed

HIGHWAY 101—QUEBEC BOUNDARY TO HIGHWAY 17

Location	Type of work	Miles or jobs completed this fiscal year
Timmins	Grading, culverts, bituminous paving	.75
Timmins (Algonquin Blvd)	Crushed gravel and stone	.75
Hwy 576 westerly	Grading, culverts, granular base, bituminous paving	10.54 (completed)
.7m W. of Warren Lake westerly	Bituminous surface treatment	6.2
Foleyet easterly—sections	Crushed gravel and stone	
Foleyet westerly	Crushed gravel and stone, bituminous paving	14.66
Chapleau southerly to jct of Hwy 129	Grading, culverts, granular base	6.96
Jct Hwy 129 westerly	Crushed gravel and stone, bituminous surface treatment and prime	41.4

HIGHWAY 118—DORSET TO GLEN ORCHARD

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 527 westerly	Grading, culverts, granular base, bituminous prime	4.87
Bracebridge	Grading, culverts, granular base, bituminous paving	.86

HIGHWAY 119—HIGHWAY 17 TO RICHAN

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 17 northerly	Granular base	7

HIGHWAY 121—HIGHWAY 35 TO HIGHWAY 28

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 35 to Hwy 519—sections	Bituminous surface treatment	4
Minden to Haliburton	Crushed gravel and stone	14.4
2m E. of Haliburton easterly	Bituminous prime	1.3

HIGHWAY 124—PARRY SOUND TO SUNDRIDGE

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 69 easterly	Grading and culverts	1
3.2m W. of Hwy 520 westerly	Granular base, bituminous paving	1.38
.7m E. of Hwy 510 easterly	Bituminous paving	.8

HIGHWAY 127—MAYNOOTH TO HIGHWAY 60

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 62 northerly	Grading, culverts, granular base, bituminous prime	1.05
Papineau Creek south	Bridge	Completed

HIGHWAY 128—KENORA TO REDDITT

Location	Type of work	Miles or jobs completed this fiscal year
Kenora northerly	Bituminous surface treatment	5

HIGHWAY 129—THESSALON TO CHAPLEAU

Location	Type of work	Miles or jobs completed this fiscal year
60m N. of Thessalon southerly	Crushed gravel and stone	20
76m N. of Thessalon northerly	Crushed gravel and stone, bituminous paving	.5
78m N. of Thessalon	Grading, culverts, granular base	.5
Jct Hwy 101—culverts	Grading, culverts, granular base	1.33
1.8m S. of Jct Hwy 101	Grading, culverts, granular base	9.1
Chapleau southerly	Bituminous surface treatment and prime	7
Nebaskwashi River	Bridge	Completed

HIGHWAY 130—PORT ARTHUR TO HIGHWAY 61

Location	Type of work	Miles or jobs completed this fiscal year
McIntyre River Bridge	Bituminous paving	.3
Jct Hwy 590 easterly	Bituminous surface treatment	4

HIGHWAY 144—SUDBURY TO HIGHWAY 101

Location	Type of work	Miles or jobs completed this fiscal year
Azilda	Granular base, bituminous paving	7.15
2.4m N. of Benny northerly	Bituminous prime	5.9
8.3m N. of Benny northerly	Bituminous prime	8.1
10m N. of Benny	Crushed gravel and stone	
16.02m N. of Benny	Grading, culverts, granular base	8.09
21m N. of Benny	Crushed gravel and stone	
51.4m N. of Benny northerly	Grading, culverts, granular base	8.90
48.1m S. of Hwy 101 southerly	Grading, culverts, granular base	9.80
40.6m S. of Hwy 101 southerly	Granular base	7.58
Mollie River	Pipe arch	Completed
32.8m S. of Hwy 101 southerly	Granular base	7.7
Makami River	Bridge	Completed
Jct Hwy 101 southerly	Granular base	16.25

HIGHWAY 400—TORONTO TO COLDWATER

Location	Type of work	Miles or jobs completed this fiscal year
Finch Ave	Grading, overpass, granular base, bituminous paving	Completed
.3m S. of Hwy 89 northerly	Bituminous paving	10.9

HIGHWAY 401 (MACDONALD-CARTIER FREEWAY)—WINDSOR-DETROIT
TUNNEL TO QUEBEC BOUNDARY

Location	Type of work	Miles or jobs completed this fiscal year
1.5m E. of Hwy 98	Grading, underpass, granular base, bituminous paving	Completed
3.2m E. of Hwy 98	Grading, underpass, granular base, bituminous paving	Completed
6.3m E. of Hwy 98	Grading, underpass, granular base, bituminous paving	Completed
8m E. of Hwy 98	Grading, underpass, granular base, bituminous paving	Completed
10.5m W. of Hwy 77	Grading, underpass, granular base, bituminous paving	Completed
8.7m W. of Hwy 77	Grading, bridge	Partially completed
7.1m W. of Hwy 77	Grading, underpass, granular base, bituminous paving	Completed
2.5m W. of Hwy 77	Underpass	Partially completed
2.1m E. of Interchange 5	Underpass	Partially completed
1.5m E. of Hwy 77 (N. Service Rd)	Grading, culverts, granular base	Partially completed

2.5m E. of Hwy 77	Underpass	Partially completed
6.4m E. of Hwy 2	Underpass	Partially completed
9.3m E. of Tilbury E. Limits	Grading, underpass	Partially completed
9.1m W. of Hwy 21	Grading, underpass	Partially completed
3.1m W. of Hwy 76	Grading, underpass, granular base, bituminous paving	Completed
.9m W. of Wellington Rd Interchange	Grading, underpass, granular base	Partially completed
.9m W. of Wellington Rd Interchange, (tributary structure)	Granular base, bridge	Completed
2.5m E. of Hwy 76	Grading, underpass, granular base	Partially completed
4.7m E. of Hwy 76	Grading, underpass, granular base	Partially completed
9.2m E. of Hwy 76	Grading, underpass, granular base	Partially completed
Dixie Road Interchange	Grading, granular base, bituminous paving	1.84 (completed)
Mimico Creek	Granular base, bituminous paving	.76 (completed)
Hwy 27	5 bridges	Completed
W. of Dixon Rd, Martingrove Rd Interchange	Grading, granular base, bituminous paving	Partially completed
Dixon Rd, Martingrove Rd Interchange	3 bridges and underpass	Completed
Islington Ave Interchange	Bituminous paving	Completed
Kipling Ave	2 underpasses	Completed
W. of Hogg's Hollow easterly	Granular base, bituminous paving	Completed
Yonge St	Bridge	Completed
Bayview Ave	Bridge	Completed
Bayview Ave to Don River	Granular base, bituminous paving	Completed
Leslie St	Bridge	Completed
Don River	Bridge	Completed
Between Victoria Pk Ave and Warden Ave.	Bituminous paving	Completed
Scarborough/Pickering Twp line	Grading, granular base, bituminous paving	1 (completed)
10m W. Interchange 80	Bituminous prime	.8
5.2m W. Interchange 80	Bituminous prime	.6
6.1m E. Interchange 86	Bituminous prime	1.2
LaRue Mills Rd	Underpass	Completed
Mitchell's Rd	Grading, underpass, granular base, bituminous paving	Completed
Moirs River Bridge	Granular base, bituminous paving	.08 (completed)
Salmon River Bridge	Granular base, bituminous paving	.09 (completed)
Interchange 105	Bituminous paving	.5 (completed)
9.45m E. of Jct Hwy 2 (Gananoque)	Granular base, bituminous paving	6.39 (completed)

15.78m E. of Jct Hwy 2 (Gananoque) including Service Centres E-7, E-8	Grading, granular base, bituminous paving	9.21 (completed)
Nine Mile Rd Interchange	Grading, granular base	Partially completed
McConnel Ave Interchange	Grading, granular base, bituminous paving	.53
Fraser Rd	Grading, underpass, granular base, bituminous paving	Completed

HIGHWAY 402—JUNCTION HIGHWAY 7 TO BLUEWATER BRIDGE

Location	Type of work	Miles or jobs completed this fiscal year
Murphy Rd, Sarnia East Limits	Grading, underpass, granular base, bituminous paving	Completed

HIGHWAY 403—BURLINGTON TO BRANTFORD

Location	Type of work	Miles or jobs completed this fiscal year
E. of Mohawk Rd westerly	Grading, culverts, granular base, bituminous paving	3.43 (completed)
TH&B Subway and approaches	Grading, culverts, granular base, underpass, bituminous paving	Completed
.5m E. of Hamilton Dr easterly	Granular base	Partially completed
Aberdeen Ave to Mohawk Rd	Granular base, bituminous paving	Partially completed
Mohawk Rd	Underpass	Completed
Mohawk Rd to Hamilton Dr	Bituminous paving	2.06
Hamilton Dr	Underpass	Completed

HIGHWAY 405—QUEEN ELIZABETH WAY TO U.S. BORDER

Location	Type of work	Miles or jobs completed this fiscal year
Stanley Ave Interchange	Grading, culverts, granular base	Partially completed

HIGHWAY 406—HIGHWAYS 20 AND 58 TO QUEEN ELIZABETH WAY

Location	Type of work	Miles or jobs completed this fiscal year
Bridge No. 7, Ramp K	Bridge	Completed
Decew Rd	Underpass	Partially completed

HIGHWAY 416—OTTAWA TO HIGHWAY 401 AT JOHNSTOWN

Location	Type of work	Miles or jobs completed this fiscal year
5.9m N. of Hwy 401 northerly	Grading and culverts	1.01

HIGHWAY 417—OTTAWA TO QUEBEC BOUNDARY

Location	Type of work	Miles or jobs completed this fiscal year
Acres Rd	Grading, underpass, granular base	Completed
Corkstown Rd, Moodie Dr, Acres Rd, County Sub Rd 9	Grading, granular base	Partially completed
Moodie Dr	Underpass	Completed
Canadian National Rly	Overpass	Completed

QUEEN ELIZABETH WAY—FORT ERIE TO TORONTO

Location	Type of work	Miles or jobs completed this fiscal year
Eighteen Mile Creek	Structure	
Ofield Road	Underpass	
Oakes Road	Underpass	
Fifty Road	Underpass	
Winona Road	Underpass	
Service Roads—7th St, Louth to Jordan—2.54m	Grading and culverts	0.18
Roberts Rd to Glover Rd—9.89 m	Grading and culverts	0.60
Service Roads—Glover Rd to Lake Ave, Hamilton—8.45m	Grading and culverts	4.50
N. & S. Service Roads—Roberts Rd to Lake Ave—18.34m	Granular base	5.80
As above	Crushed gravel and stone	6.50
Service Roads—Glover Rd to Lake Ave	Bituminous paving	0.80
Glover Road	Underpass	
Fruitland Road	Underpass	
Millen Road	Underpass	Completed
Grays Road	Underpass	
Burlington St Interchange to Lake Ave	Repaving	2.20
7m W. of Hwy 10 westerly—3.38m	Grading and culverts	0.03
As above	Granular base	0.34
As above	Crushed gravel and stone	0.10
W. of Hwy 27 Interchange to W. of Etobicoke Creek and from S. of N. Queen St on Hwy 27 to CPR—2.45m	Grading, culverts, granular base, concrete and asphalt paving	Completed

Hwy 27 Interchange	Granular base, bituminous paving	
E. of Hwy 27 to Royal York Rd including North and South Service Roads—3.21m	Grading, culverts, granular base, bituminous paving	Completed
Islington Ave	Overpass	Completed
Wickman Rd	Overpass	Completed
Kipling Ave	Overpass	Completed
Evans Ave	Underpass	Completed
Evans Ave	East Ramp	Completed
Evans Ave	West Ramp	Completed
East Mall	Overpass	Completed

KITCHENER-WATERLOO EXPRESSWAY

Location	Type of work	Miles or jobs completed this fiscal year
King St to Frederick St	Grading, culverts, granular base, bituminous paving	Partially completed
Frederick St to N. of Bridgeport Rd	Granular base, bituminous paving	Partially completed
Guelph St	Grading, culverts, granular base, bituminous paving	.42 (completed)
Guelph St	Underpass	Completed
CNR Underpass	Underpass	Completed
Homer Watson Blvd to W. of King St	Grading, culverts, granular base, bituminous paving	Partially completed
Wellington St northerly	Grading and culverts	Partially completed
Homer Watson Blvd	Overpass	Completed
Ottawa St. S.	Overpass	Completed
CNR Subway	Underpass	Completed
Courtland Ave	Overpass	Completed
Frederick St	Underpass	Partially completed
Victoria St	Underpass	Partially completed
Wellington St	Underpass	Partially completed
Lancaster St	Underpass	Partially completed
Bridgeport Rd	Overpass	Partially completed

SECONDARY HIGHWAY 500—DENBIGH TO BANCROFT

Location	Type of work	Miles or jobs completed this fiscal year
6m E. of Bancroft easterly	Grading, culverts, granular base	1.5
Bancroft easterly	Bituminous prime	7.5
Dungannon Bridge	Bridge	Completed

HIGHWAY 501—PORT SEVERN TO HONEY HARBOUR

Location	Type of work	Miles or jobs completed this fiscal year
.4m S. of Bass Bay Rd northerly	Grading and culverts	1.2

SECONDARY HIGHWAY 503—KIRKFIELD TO TORY HILL

Location	Type of work	Miles or jobs completed this fiscal year
Sebright southerly	Bituminous prime	8.2
Uphill easterly	Bituminous paving	2.1
Uphill easterly	Bituminous prime	2.5
Head Lake	Bituminous prime	1
Norland easterly	Bituminous prime	.5

SECONDARY HIGHWAY 505—HIGHWAY 46 TO HIGHWAY 503

Location	Type of work	Miles or jobs completed this fiscal year
Uphill to Victoria Rd	Bituminous prime	10

SECONDARY HIGHWAY 506—HIGHWAY 41 TO PLEVNA

Location	Type of work	Miles or jobs completed this fiscal year
Sideroad from Fernleigh	Granular base	.5
W. of Plevna	Granular base, bituminous paving	2.10

SECONDARY HIGHWAY 507—HIGHWAY 28 TO HIGHWAY 503

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 28 northerly	Granular base, bituminous prime	6.3
1.15m S. of Gooderham southerly	Granular base	.5
.65m S. of Gooderham southerly	Granular base, bituminous paving	.5
Hwy 503 southerly	Bituminous prime	17

SECONDARY HIGHWAY 508—BURNSTOWN TO BLACK DONALD

Location	Type of work	Miles or jobs completed this fiscal year
Burnstown to Black Donald	Crushed gravel and stone, bituminous surface treatment	23.9

SECONDARY HIGHWAY 509—HIGHWAY 7 TO SNOW ROAD

Location	Type of work	Miles or jobs completed this fiscal year
S. of Clarendon—various	Bituminous surface treatment	1.2

SECONDARY HIGHWAY 511—SEC. HIGHWAY 508 TO BRIGHTSIDE

Location	Type of work	Miles or jobs completed this fiscal year
Calabogie to Brightside	Crushed gravel and stone, bituminous surface treatment	20

SECONDARY HIGHWAY 513—DACRE TO HYNDFORD

Location	Type of work	Miles or jobs completed this fiscal year
Dacre to Caldwell	Bituminous prime	10

SECONDARY HIGHWAY 514—HIGHWAY 60 TO INTERLAKEN

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 60 to Interlaken	Bituminous prime	10

SECONDARY HIGHWAY 515—COMBERMERE TO FOYMOUNT

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 62 southerly	Bituminous prime	2.84
5.6m S. of Hwy 62 southerly	Crushed gravel and stone	.24
Approaches to Latchford Bailey Bridge	Granular base, bridge	.04 (completed)
Madawaska River	Bridge	Completed
Quadeville westerly	Granular base	1.05

SECONDARY HIGHWAY 517—HIGHWAY 62 TO NEW CARLOW

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 62 southerly—various	Granular base, bituminous paving	

SECONDARY HIGHWAY 518—SAND LAKE TO HIGHWAY 69

Location	Type of work	Miles or jobs completed this fiscal year
2.9m E. of Hwy 69 easterly	Grading, culverts, granular base	1.5
Hwy 69 to Sprucedale—sections	Bituminous prime	12

SECONDARY HIGHWAY 519—HIGHWAY 121 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
2.3m W. of Hwy 121 westerly	Granular base	
3.2m W. of Hwy 121 westerly	Granular base	
4m N. of Hwy 121 northerly	Bituminous prime	8
1.3m S. of Hwy 121 southerly	Bituminous prime	1.5
2.3 to 3.77m E. of Hwy 121	Bituminous paving	1.45
Haliburton (Drag River)	Grading, culverts, granular base, bridge	.16 (completed)
Eagle Lake northerly	Grading, culverts, granular base	.95

SECONDARY HIGHWAY 520—BURKS FALLS TO ARDBEG

Location	Type of work	Miles or jobs completed this fiscal year
Distress River	Bridge, grading, culverts, granular base, bituminous paving	Completed
Dunchurch to Ardbeg	Bituminous prime	16.5

SECONDARY HIGHWAY 522—TROUT CREEK TO ESS NARROWS

Location	Type of work	Miles or jobs completed this fiscal year
Golden Valley easterly	Grading, culverts, granular base	1.50
Loring westerly	Bituminous prime	13.7

SECONDARY HIGHWAY 523—HIGHWAY 60 TO HASTINGS COUNTY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 60 southerly—sections	Granular base	13.5
Hwy 60 southerly—sections	Crushed gravel and stone	3
6m S. of Hwy 60 southerly	Bituminous prime	7
Moore Creek	Bailey bridge	Completed

SECONDARY HIGHWAY 524—SEC. HWY 534 TO SEC. HWY 522

Location	Type of work	Miles or jobs completed this fiscal year
Sec Hwy 534 to Sec Hwy 522	Bituminous prime	3.1

SECONDARY HIGHWAY 526—HIGHWAY 69 TO BRITT

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 69 to Britt	Bituminous prime	2.3

SECONDARY HIGHWAY 527—BAYSVILLE TO HUNTSVILLE

Location	Type of work	Miles or jobs completed this fiscal year
Huntsville southerly—sections	Bituminous surface treatment	9.5

SECONDARY HIGHWAY 528—HIGHWAY 64 TO WOLSELEY BAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 64 to Wolseley Bay (Inc. 528A)	Crushed gravel and stone, bituminous prime	11.6

SECONDARY HIGHWAY 529—SOUTH JCT HWY 69 TO NORTH JCT HWY 69

Location	Type of work	Miles or jobs completed this fiscal year
N. Jct Hwy 69 southerly	Bituminous prime	12.2
(529A) Bayfield Wharf	Bituminous prime	3

SECONDARY HIGHWAY 530—SEC HWY 519 TO HIGHWAY 35

Location	Type of work	Miles or jobs completed this fiscal year
6m E. of Carnarvon to Hwy 519	Bituminous prime	5.5
6m E. of Hwy 35 easterly	Bituminous paving	2

SECONDARY HIGHWAY 532—HIGHWAY 11 TO HIGHWAY 69

Location	Type of work	Miles or jobs completed this fiscal year
.7m S. of Muskoka R. Bridge southerly	Grading, culverts, granular base, bituminous paving	.51
3.4m N. of Hwy. 118 northerly	Grading, culverts, granular base, bituminous prime	.60

SECONDARY HIGHWAY 533—MATTAWA TO HIGHWAY 63

Location	Type of work	Miles or jobs completed this fiscal year
Mattawa to Jct Hwy 63	Crushed gravel and stone	32.2
12m N. of Mattawa northerly	Bituminous prime	14.7

SECONDARY HIGHWAY 534—POWASSAN TO RESTOULE

Location	Type of work	Miles or jobs completed this fiscal year
Powassan to Restoule—incl. 524	Crushed gravel and stone	25
Powassan westerly	Bituminous prime	14.7
4m W. of Powassan westerly	Bituminous paving	1.5

SECONDARY HIGHWAY 535—NOELVILLE TO RIVIERE VEUVE

Location	Type of work	Miles or jobs completed this fiscal year
Noelville to Riviere Veuve	Crushed gravel and stone	29.9
Noelville northerly—sections	Bituminous prime	9.5
Hagar, CPR crossing	Bituminous paving	Completed

SECONDARY HIGHWAY 539—WARREN TO FIELD

Location	Type of work	Miles or jobs completed this fiscal year
Warren to Field, incl. 539A	Crushed gravel and stone	25.6
Warren to Field, incl. 539A	Bituminous prime	26.8

SECONDARY HIGHWAY 540—LITTLE CURRENT TO MELDRUM BAY

Location	Type of work	Miles or jobs completed this fiscal year
14m W. of Little Current westerly	Granular base	.4
1.9m E. of Hwy 551	Granular base	.2
Hwy 542 westerly	Bituminous prime	11.6
15.1m W. of Jct 542 westerly	Granular base	3.6
11.6m W. of Jct 542 westerly	Bituminous prime	3.8
18.2m W. of Jct 542 westerly	Granular base	1.3
23m W. Jct 540A westerly	Granular base	1
(540A) Jct 540 westerly	Bituminous prime	2.5
(540A) 1.5m W. Jct 540 westerly	Granular base	.1
(540B) W. Jct Hwy 540 westerly	Bituminous prime	1.2

SECONDARY HIGHWAY 542—SUDBURY TO SKEAD

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 68 westerly	Bituminous prime	17.6
(542A)	Bituminous prime	1.5
3.5m E. Jct 551 easterly	Granular base	.3
2.8m E. Jct 551 easterly	Granular base	1

SECONDARY HIGHWAY 543—SUDBURY TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Sudbury southerly	Granular base	Partially completed

SECONDARY HIGHWAY 546—IRON BRIDGE TO MOUNT LAKE

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 554 northerly	Grading, culverts, granular base	Partially completed
36.8m N. of Hwy 554 northerly	Grading, culverts, granular base	6

SECONDARY HIGHWAY 548—ST. JOSEPH ISLAND

Location	Type of work	Miles or jobs completed this fiscal year
Richards Landing easterly 2.3m and Jct Hwy 17 to Hilton Beach	Bituminous surface treatment	5.6
2.3m E. of Richards Landing easterly	Grading, culverts, granular base	1.5
Hilton Beach northerly 3m and Richards Landing .2m	Bituminous prime and surface treatment	

SECONDARY HIGHWAY 549—LAKE PANACHE TO HIGHWAY 17

Location	Type of work	Miles or jobs completed this fiscal year
Highway 17 to Lake Panache	Bituminous prime	9.1
1.8m S. Hwy 17 southerly	Crushed gravel and stone	
2.4m S. Hwy 17 southerly	Granular base	.5

SECONDARY HIGHWAY 550—SAULT STE. MARIE TO GROS CAP

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 565 westerly	Bituminous surface treatment	5.2

SECONDARY HIGHWAY 551—PUBLIC WHARF TO EXCELSIOR

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 542 northerly	Bituminous prime	5.8
3m N. of Mindemoya	Crushed gravel and stone	
2.8m N. of Hwy 542 northerly	Grading, culverts, granular base	2.02

SECONDARY HIGHWAY 552—HIGHWAY 556 TO TOWNSHIP ROAD

Location	Type of work	Miles or jobs completed this fiscal year
10m E. of Hwy 17 to 5m W. of Hwy 17 —sections	Bituminous surface treatment	4.3
10m E. of Hwy 17 to 5m W. of Hwy 17 —sections	Bituminous prime	1.4
Old Hwy 17 from Jct Hwy 17, 2m N. of Hwy 552	Bituminous surface treatment	3.6
Goulais River	2 Bailey bridges	Completed

SECONDARY HIGHWAY 558—HAILEYBURY TO MONTREAL RIVER

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 11 westerly—sections	Granular base	1
Haileybury to Montreal River—sections	Crushed gravel and stone	16.6

SECONDARY HIGHWAY 559—S. JCT HWY 69 TO N. JCT HWY 69

Location	Type of work	Miles or jobs completed this fiscal year
Jct Killbear Pk Rd northerly	Bituminous surface treatment	9.8

SECONDARY HIGHWAY 560—ENGLEHART TO GOGAMA

Location	Type of work	Miles or jobs completed this fiscal year
Englehart to Gogama—sections	Crushed gravel and stone	140.6
9m W. of Hwy 65 westerly	Granular base	16.5
8m W. of Hwy 65 westerly	Crushed gravel and stone	25.5
Elk Lake easterly	Granular base	20
6.5m W. of Elk Lake westerly	Grading, culverts, granular base	2.5
Elk Lake westerly	Bituminous surface treatment	5.5
4.5m S. of Gogama southerly	Granular base	12
55.9m S. Hwy 101 southerly	Crushed gravel and stone	12

SECONDARY HIGHWAY 561—BRUCE MINES TO HIGHWAY 638

Location	Type of work	Miles or jobs completed this fiscal year
1.5m N. of Hwy 17 northerly	Bituminous surface treatment	1.7
3.3m N. of Hwy 17 northerly	Grading, culverts, granular base	1.5

SECONDARY HIGHWAY 562—HIGHWAY 11 TO HIGHWAY 65

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 11	Crushed gravel and stone	

SECONDARY HIGHWAY 563—HIGHWAY 17 TO BATCHAWANA BAY

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 17 westerly	Bituminous surface treatment	3.4

SECONDARY HIGHWAY 564—HIGHWAY 112 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 112 easterly	Granular base (sections)	2

SECONDARY HIGHWAY 566—MATACHEWAN TO END OF HWY

Location	Type of work	Miles or jobs completed this fiscal year
8m W. of Matachewan westerly	Crushed gravel and stone	

SECONDARY HIGHWAY 567—NORTH COBALT TO SILVER CENTRE

Location	Type of work	Miles or jobs completed this fiscal year
North Cobalt southerly	Granular base	17

SECONDARY HIGHWAY 568—HIGHWAY 11 TO KENO GAMI

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 easterly—sections	Crushed gravel and stone	1

SECONDARY HIGHWAY 569—S. JCT HWY 11 TO N. JCT HWY 11

Location	Type of work	Miles or jobs completed this fiscal year
S. Jct Hwy 11 to N. Jct Hwy 11 —sections	Crushed gravel and stone	17.5

SECONDARY HIGHWAY 570—HIGHWAY 11 TO SESEKINIKA

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 easterly	Crushed gravel and stone	1.9

SECONDARY HIGHWAY 572—HIGHWAY 11 TO HIGHWAY 101

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 101 to Jct Hwy 11	Crushed gravel and stone	10.3

SECONDARY HIGHWAY 574—NOREMBEGA TO COCHRANE

Location	Type of work	Miles or jobs completed this fiscal year
Norembega to Cochrane	Crushed gravel and stone	18
Jct Hwy 652 southerly	Bituminous prime	4
Cochrane easterly	Bituminous surface treatment	6

SECONDARY HIGHWAY 577—SHILLINGTON TO HIGHWAY 67

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 101 northerly	Crushed gravel and stone	8

SECONDARY HIGHWAY 578—IROQUOIS FALLS TO HIGHWAY 11

Location	Type of work	Miles or jobs completed this fiscal year
Herman Lake to Montrock	Crushed gravel and stone	6

SECONDARY HIGHWAY 579—COCHRANE TO GARDINER

Location	Type of work	Miles or jobs completed this fiscal year
Cochrane to Gardiner	Crushed gravel and stone	18

SECONDARY HIGHWAY 583—MEAD LAKE TO STE. THERESE

Location	Type of work	Miles or jobs completed this fiscal year
Hearst to Mead	Crushed gravel and stone	23
Hearst northerly	Bituminous surface treatment	2.2

SECONDARY HIGHWAY 585—NIPIGON TO PINE PORTAGE

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 11 to end of Hwy	Bituminous prime	22.9

SECONDARY HIGHWAY 587—HIGHWAYS 11 & 17 TO SILVER ISLET

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 southerly	Bituminous prime	26

SECONDARY HIGHWAY 588—STANLEY TO ROUND LAKE RD

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 westerly—sections	Bituminous prime	21

SECONDARY HIGHWAY 589—HWYS 11A & 17A TO END OF HWY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11A northerly	Bituminous prime	18.7

SECONDARY HIGHWAY 590—HIGHWAY 130 TO HIGHWAY 588

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 130 westerly—sections	Bituminous prime	17

SECONDARY HIGHWAY 591—HIGHWAY 589 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 589 westerly	Bituminous prime	4.9

SECONDARY HIGHWAY 596—KENORA TO MINAKI

Location	Type of work	Miles or jobs completed this fiscal year
Norman to Jct Hwy 641	Bituminous prime	9.1
Hwy 641 northerly	Bituminous surface treatment	21.5

SECONDARY HIGHWAY 599—HIGHWAY 17 TO HIGHWAY 646

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 17 northerly	Bituminous prime	34

SECONDARY HIGHWAY 600—HIGHWAY 71 TO RAINY RIVER

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 northerly	Granular base	13

SECONDARY HIGHWAY 601—HIGHWAY 17 TO DRYDEN

Location	Type of work	Miles or jobs completed this fiscal year
East leg, Hwy 17 northerly	Granular base	8
West leg, Hwy 17 northerly	Granular base	1

SECONDARY HIGHWAY 602—FORT FRANCES TO EMO

Location	Type of work	Miles or jobs completed this fiscal year
Fort Frances westerly	Bituminous surface treatment	24.5
La Vallee R. Bridge westerly	Bituminous prime	11.8
5m S. of Emo to 1m S.	Granular base	4
Emo easterly	Granular base	3.5

SECONDARY HIGHWAY 605—HIGHWAY 17 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 17 northerly	Granular base	7.5

SECONDARY HIGHWAY 607 & 607A—HIGHWAY 64 TO HIGHWAY 69

Location	Type of work	Miles or jobs completed this fiscal year
French River to Jct Hwy 69	Crushed gravel and stone	7.4
1m S. Hwy 64 to Hwy 69	Bituminous prime	6

SECONDARY HIGHWAY 610—HIGHWAY 67 TO HIGHWAY 101

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 67 westerly	Bituminous surface treatment	3
Hoyle to Dugwal	Bituminous surface treatment	2.5

SECONDARY HIGHWAY 613—BIG FORK TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 northerly	Granular base	8

SECONDARY HIGHWAY 614—HIGHWAY 17 TO MANITOUWADGE

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 17 northerly	Grading, culverts, granular base	12.2
Manitouwadge and southerly	Bituminous prime and surface treatment	18.6

SECONDARY HIGHWAY 615—HIGHWAY 71 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 71 to end of road	Bituminous prime	13.6
Hwy 71 northerly—sections	Granular base	13.5
4m N. Jct Hwy 71 northerly	Granular base	.5

SECONDARY HIGHWAY 620—HIGHWAY 62 TO HIGHWAY 28

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 62 westerly	Granular base	.3
.5m E. of Apsley easterly	Bituminous prime	4.50

SECONDARY HIGHWAY 621—HIGHWAY 11 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Big Grassy River Bridge	Granular base	

SECONDARY HIGHWAY 624—HWYS 11 & 569 TO LARDER LAKE

Location	Type of work	Miles or jobs completed this fiscal year
7m S. of Hwy 66 southerly	Bituminous surface treatment	6.3
8m S. of Hwy 66 southerly	Bituminous resurfacing	.9

SECONDARY HIGHWAY 625—CARAMAT TO HIGHWAY 11

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 11 southerly	Crushed gravel and stone	20

SECONDARY HIGHWAY 630—KIOSK TO HIGHWAY 17

Location	Type of work	Miles or jobs completed this fiscal year
Kiosk northerly	Crushed gravel and stone	18.1
4.5m N. of Kiosk northerly—sections	Bituminous paving	.5
9.1m N. of Kiosk southerly	Bituminous prime	4.5
18m N. of Kiosk northerly—sections	Bituminous paving.	.5

SECONDARY HIGHWAY 631—SHEKAK RIVER TO HIGHWAY 11

Location	Type of work	Miles or jobs completed this fiscal year
15m S. of Hornepayne southerly	Grading, culverts, granular base	13.1
6.72m S. of Hornepayne southerly	Granular base	8.29
Hornepayne to Hwy 11	Crushed gravel and stone	46

SECONDARY HIGHWAY 632—HIGHWAY 118 TO HIGHWAY 532

Location	Type of work	Miles or jobs completed this fiscal year
Rosseau southerly—sections	Bituminous paving	4

SECONDARY HIGHWAY 634—VAL CARON TO HIGHWAY 144

Location	Type of work	Miles or jobs completed this fiscal year
7.5m W. of Jct Hwy 69 northerly	Bituminous paving	.3

SECONDARY HIGHWAY 636—HIGHWAY 17 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 northerly	Bituminous prime	3

SECONDARY HIGHWAY 637—HIGHWAY 69 TO KILLARNEY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 69 to Killarney	Bituminous prime	41.8

SECONDARY HIGHWAY 638—DUNNS VALLEY TO ECHO BAY

Location	Type of work	Miles or jobs completed this fiscal year
Sylvan Valley	Bailey bridge	Completed
Thessalon R. Bridge to Wing's Sideroad	Grading, culverts, granular base	1
Various locations	Crushed gravel and stone	14

SECONDARY HIGHWAY 639—HIGHWAY 108 TO HIGHWAY 129

Location	Type of work	Miles or jobs completed this fiscal year
Jct Hwy 108 to Jct Hwy 546	Bituminous prime	14.4

SECONDARY HIGHWAY 641—HIGHWAY 17 TO PELLATT

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 596 southerly	Bituminous prime	6.5

SECONDARY HIGHWAY 644—HIGHWAY 69 TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 69 westerly	Bituminous prime	.6

SECONDARY HIGHWAY 645—BYNG INLET TO HIGHWAY 529

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 529 westerly	Bituminous prime	2.5

SECONDARY HIGHWAY 647—VERMILION BAY TO BLUE LAKE PROVINCIAL PARK

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 17 to end of road	Granular base	5.5

SECONDARY HIGHWAY 651—HIGHWAY 101 TO MISSINABIE

Location	Type of work	Miles or jobs completed this fiscal year
9m N. of Hwy 101 northerly	Grading, culverts, granular base	2.97
Ogasiwi Creek	Bridge	Completed
Windermere River	Bridge	Completed
Little Jackpine River	Culvert	Completed

SECONDARY HIGHWAY 654—HIGHWAY 11 TO HIGHWAY 534

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 westerly	Crushed gravel and stone	14.2
3m W. of Hwy 11 westerly	Bituminous paving	2

SECONDARY HIGHWAY 657—HWY 105 TO GOVERNMENT DOCKS

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 105 easterly	Granular base	3.9

SECONDARY HIGHWAY 658—HIGHWAY 17 TO FAIRBANK PROVINCIAL PARK

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 17 northerly	Bituminous prime	1.1
Hwy 17 northerly	Granular base	1.3
7m N. of Hwy 17	Granular base	.2

SECONDARY HIGHWAY 659—HIGHWAY 604 TO HIGHWAY 128

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 604 to Hwy 128	Granular base	12.3

SECONDARY HIGHWAY 660—HIGHWAY 69 TO HIGHWAY 103

Location	Type of work	Miles or jobs completed this fiscal year
Bala westerly	Bituminous prime	4

SECONDARY HIGHWAY 661—HIGHWAY 144 TO GOGAMA

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 144 to Gogama	Grading, culverts, granular base	1.89

TERTIARY ROAD 802—BURCHELL LAKE TO KASHABOWIE

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 11 southerly	Bituminous prime	7.5

TERTIARY ROAD 805—HIGHWAY 539A TO END OF HIGHWAY

Location	Type of work	Miles or jobs completed this fiscal year
Hwy 539A to end of Hwy	Crushed gravel and stone	35

Research Branch

This year the highlights of the research program have been the branch's work on pavement wear caused by studded tires and the formulation of a proposed new method of controlling vehicle weights in order that commercial vehicles can carry the highest possible loads consistent with the ability of the Province's roads and bridges to accept those loads without suffering undue damage.

Members of the Branch contributed papers to technical organizations and served on many committees involved in highway engineering. A number of technical reports were published on research projects that have been completed and on others resulting from The Ontario Joint Highway Research Program which have been undertaken by Ontario universities under the sponsorship of the Department.

Pavement Wear Attributed to Studded Tires

A study of pavement wear was started early in 1968 to investigate the causes of exceptional wear occurring on the Toronto Bypass section of Hwy. 401 and in the town of Huntsville. The wear of these pavements and the rather rapid disappearance of painted traffic markings was attributed to the use of studded tires. Measurements obtained over the 1968-69 winter period showed that significant wear had occurred on all types of pavement where traffic volumes were moderate to heavy. This information, used in conjunction with the results of observations and special studies in Europe, indicated that the service life of bituminous surfacings may be reduced to as little as three to five years on heavily trafficked highways. Further aims of this study will be to evaluate the longer term effects as the percentage of vehicles equipped with studded tires increases, and to predict future costs resulting from the increased maintenance that will be required.

Heavy Vehicle Weight Regulation

As a result of this project a new method of heavy vehicle weight regulation has been proposed which can be used to effectively control not only the gross weight of a vehicle, but the weight of individual axles and the length of interaxle spacings. The method is based on the broad principles that axle loads must be controlled to ensure that the pavements are not overstressed, and that the number of axles, their loads and their spacings must all be taken into account in determining the total load each vehicle can be allowed to apply to the Province's bridges.

Table 1, Basic Weights on Axle Units

SINGLE-AXLE		TRIPLE-AXLE	
SPACING IN FEET	GROSS WEIGHT IN KIPS	SPACING IN FEET	GROSS WEIGHT IN KIPS
—	—	< 8.0	40.0
		8.0	44.0
—	20.0	9.0	44.0
		9.25	44.5
		9.5	45.0
		9.75	45.5
		10.0	46.0
		10.25	46.5
		10.5	47.5
		10.75	48.0
		11.0	49.0
		11.25	49.5
DUAL-AXLE		11.5	50.0
		11.75	50.5
< 4.0	32.0	12.0	51.0
4.0	35.0	12.25	51.5
4.25	35.5	12.5	52.5
		12.75	53.0
4.5	36.0	13.0	54.0
		13.25	54.5
4.75	36.5	13.5	55.0
		13.75	55.5
5.0	37.5	14.0	56.0
		14.25	56.5
5.25	38.0	14.5	57.0
		14.75	57.5
5.5	38.5	15.0	58.5
		15.25	59.0
5.75	39.0	15.5	59.5
		15.75	59.5
6.0	40.0	16.0	60.0

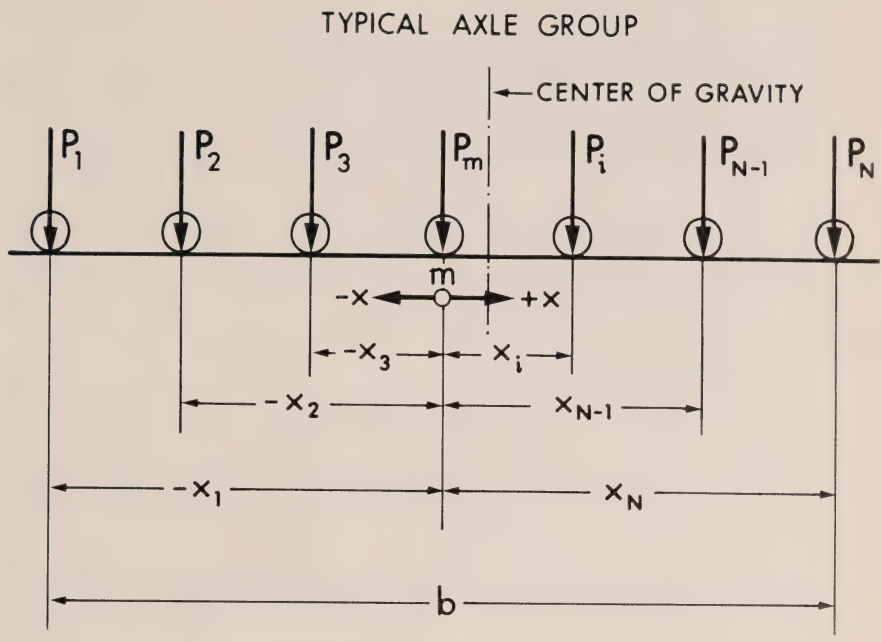
Notes.

1. Maximum weight per inch of tire width = 600 lbs.

2. Front steering axle with single tires is usually 10 kips.

3. Most commonly occurring axle spacings and basic weights are heavily framed in the table.

Figure 1, General Axle Configuration



AXLE AT m NEAREST TO C of G c CENTRE OF GRAVITY (C of G)

P_1 P_2 P_3 P_m P_i P_{N-1} P_N m x_3 x_i x_2 x_{N-1} x_1 x_N b

Road Bases Experiment

On this continuing project it has been found that seasonal variations in pavement deflections are more pronounced in sections having bases of unbound granular materials than in those containing bituminous or Portland cement binders. The sections with unbound granular bases have also exhibited more cracking and alligating and have required more patching. Rutting is more severe and their over-all performance is not as good as those sections having cemented granular bases. Frost penetration and subsequent frost heaving has been more prevalent in the unbound granular bases.

The full-depth asphalt and the deep-strength asphalt sections have given excellent performance. They have retained good riding qualities and have not cracked. The full-depth asphalt sections are superior to the deep-strength sections in resistance to rutting and in their retention of better riding qualities.

Transverse Cracking of Bituminous Pavements

This study has revealed that transverse cracking in bituminous pavement can be attributed to a variety of causes related to changes in dimensions which occur when materials are cooled. Cracking is particularly prevalent in asphalt mixes because their coefficient of expansion at low temperatures (below 0°F) are normally twice as high as graded aggregates compacted without asphaltic binders, i.e. granular bases and subbases. One result of the study has been the recommendation to use softer asphalts which continue to flow at colder temperatures and survive colder environments. This approach to the problem shows considerable promise provided construction difficulties can be overcome and the lower stability of the softer asphalts in hot weather can be tolerated.

Research in Highway Traffic

Two research projects described in previous reports have now been completed. The first was an examination of the most effective sampling procedures and rates for roadside-interview origin and destination surveys, as well as the variation of such data from season to season. In all cases, bi-directional interviewing was found to produce smaller errors in trip estimates than uni-directional interviewing, but especially where the day-to-day variation in trip movements was small. Proportional bi-directional interviewing (bi-directional interviewing at all times, with interviewers allocated to each direction in proportion to the directional traffic volumes) was recommended because of its accuracy,



Styrofoam sheeting laid on road base prevents winter frost heaving.

flexibility, and safety characteristics. The trip movements at the location studied, showed considerable season-to-season variation, both in volume (all trip purposes) and origin-destination distribution (work trips). The extent to which this variation is particular to the location studied is unknown.

The second project now completed was the development of methods of estimating average daily traffic volumes and design hourly traffic volumes from a few short periodic counts. The recommended method of estimating annual average daily traffic was based on six bimonthly one-day traffic counts, including a May to October weekend day. The recommended method of estimating design hourly traffic volumes was based on a three-day summer weekend traffic count. Priority lists of counting locations have been and are being developed on a continuing basis.

A study of the feasibility of constructing additional short, periodic passing lane sections on certain two-lane highways is continuing. The problem is being analyzed by means of computer simulation of traffic flow, based on and validated by field traffic studies. The value of the benefits obtained will be compared with construction and maintenance cost for such lanes to determine their feasibility. Work this year has been directed toward formulating the simulation model and collecting the data on driver and vehicular behavior necessary for input to the model.

The development and evaluation of a multiple path traffic assignment method for use in transportation planning has continued satisfactorily during the year, and the method has now reached a state of readiness for regular use in planning studies.

Investigation of The Skid Resistance of Pavement Surfaces

The study of the skid resistance (slipperiness) of the Province's highways is continuing using the newly devised photo-interpretation method of evaluating pavement surfaces.

Among other factors the effects of different pavement materials on the durability of skid resistance is being investigated. In this regard it has been determined that certain rock types (basaltic) maintain their skid resistance level and tend to improve with time. Others, such as limestone, have a good initial resistance which declines rapidly and stabilizes at a lower level. The decline in resistance of dolomitic rock is slower but continuous.

Where wet pavement skidding was reported accident locations were tested and the skid resistance of the pavement was evaluated in context with the requirements of the particular traffic conditions. Additionally, all locations where doubt regarding the adequacy of a pavement's skid resistance existed have been examined with a view to undertaking corrective measures.

Measurements of The Riding Quality of Roads

A road rating experiment was undertaken to determine the relationship between road roughness measured with a Profilometer and the opinions of road users. Further studies were made with three different measuring devices, the Profilometer, the Roughometer and a Portland Cement Association Roadmeter. The aims of this study were to examine their individual characteristics, the validity of their measurements, to determine the relationship of results obtained with road users' opinions and to determine a rational classification of roughness in terms of riding quality. It was found that all three devices gave results which correlated satisfactorily with users' ratings and with each other. A further aim of the study was to obtain comparative information through which a better understanding of each instruments' capacity would enable intending users to select the one best suited to his needs.

Structural Evaluation of Lightly Trafficked Municipal Roads

In this study the Benkelman Beam is being used to determine the seasonal fluctuations in the strengths of municipal roads and to establish design criteria for low-traffic volume roads.

One important result of this study has been the development of a relationship between traffic volume and permissible pavement deflection which has been used to establish design criteria based on the number of equivalent 18,000 lb. axle loads per day. This study also confirmed that seasonal variation in pavement performance and the strength of low-traffic-volume roads is largely due to environmental conditions.

Dynamic Load Scale

A prototype dynamic weight scale has been designed and, in conjunction with an electronic data acquisition system, it will be used to record axle weights, axle spacings, gross vehicle weight, vehicle velocity and dynamic overloads. The data obtained will be further processed by the IBM 360 computer to provide statistical information on vehicle loadings and axle configurations.



A stretch of a new type of guide rail—three-strand anchored 1/2 inch cable strung between sturdy cedar posts.

Bridge Vibration Studies

In these studies the dynamic responses of bridges are being determined by measuring vertical displacement of the structures under the loading of two heavy vehicles (type 3S2). From these tests it has been established that some continuous steel bridges exhibit as much as 100 percent dynamic overload. A computer program written by researchers at the University of Illinois is being adapted for use in the study of the dynamic interaction between heavy vehicles and bridges and for pavements. Input data for the programme includes : pavement profile, vehicle parameters and bridge properties such as physical dimensions, elastic moduli and inertia. The computer program is based on incremental iterative integration and requires a true profile of the pavement in digital form as an input. Since there is no measuring device currently available that could supply a true profile the Bridge Group has designed an Absolute Digital Profile Meter which will record surface characteristics which can be used to compute the time profile.

A Study of Truss Bridges

A test project was initiated during the spring to substantiate theoretical work on the ultimate strength of truss bridges. Several bridges destined for replacement were inspected but only one test was accomplished. This test was carried out on a 50 ft. pony truss bridge at Exeter which failed at a load within 4 percent of the value predicted by computations. Further tests are scheduled on this project for the ensuing year.

Load Distribution in Multigirder Bridges

A computer program is being formulated to produce influence surfaces for bending moment, stress and reaction. From the theoretical point of view the programme is a hybrid computational system using the ordinary beam displacement method and the finite element technique. When completed, the program will be useful for the analysis of continuous skewed bridges with variable inertia.

Investigations of Bridges

A number of bridges exhibiting unusual degrees of deterioration and cracking have been investigated during the year. To facilitate such investigations in the future a test bed has been constructed in the laboratory which will enable both aluminum and micro-concrete models of slab and multigirder bridges to be tested.

Impact Testing of Sign Supports, Lighting Standards and Low-Cost Barrier Systems

Proving tests were carried out on the new design of guide rail to examine the effects of shoulder drop-off behind the barrier and to investigate the performance of a vehicle as it was arrested and re-directed by the barrier. It was found that slight modifications were required to ensure safer performance and avoid spin-out of the vehicle after impact ; a reduction in the vertical spacing between cables to 3-in. was effective.

Tests of concrete median barriers revealed that at speeds up to 40 mph. and low angles of impact, these barriers afforded good control and redirection of impacting vehicles ; at higher speeds and more acute impact angles the damage to vehicles was severe.

A limited number of tests were made on an energy absorbing structure designed to protect the motorist in violent impacts with exposed ends of guide-rails, barriers and rigid structures ; further tests will be required before a satisfactory design is developed .

A number of light standards and sign supports with different designs of breakaway bases were tested to determine those most suitable for installations where unprotected poles or supports might be hazardous ; the results of these tests have been most helpful in formulating Department policy governing selection of pole designs for different types of location on the highway.



Ultimate loading test to determine whether bridge should be replaced.

Services Branch

This branch, through its various sections, plays a vital role as coordinator and expediter of services for all other branches of the Department. Its functions involve preparation and care of documents, equipment of all kinds, office services, supplies, tenders, land surveys and property management.

TENDERS SECTION

During the 1968-69 fiscal year over 2,300 contractors and suppliers attended public openings of tenders arranged by this section.

1,607 orders were issued for 2,286 advertisements. Total cost of advertising was \$69,266.

LAND SURVEYS SECTION

Through the regional offices, registration was obtained for 1,768 plans in the proper registry and land titles offices during the fiscal year.

During the fiscal year 101.12 miles of highway were designated as controlled-access highways. This figure includes the designation of :

1. Madoc By-Pass
2. Bewdley By-Pass
3. Winchester By-Pass
4. Highway 121 Diversion
5. London to Sarnia
6. Ottawa Queensway
7. E. C. Row Expressway
8. Southwest Freeway

The total mileage of controlled-access highways in the province now stands at 2019.58. The designation as controlled-access highway, of the Dundas By-Pass in the Township of Ancaster, with a mileage of 3.41 miles, was revoked.

The Land Surveys Section conducted one training course for field personnel during the year. The course was attended by 17 candidates. Land Surveys qualifying examinations for field and drafting staff were tried by 183 candidates of whom 102 passed and 15 passed with supplements. The apprentice program for Ontario Land Surveyors is being continued by this section and during the year three apprentices passed the Final Part I examinations and one apprentice passed the Final Part 2 examination.

Co-ordinate control surveys are in progress on sections of highways throughout the Province. This survey operation employs electronic survey instruments capable of measuring, within a fraction of an inch, any distance from 50 feet to several miles, and a transit which allows direct reading on angular measurements to one second.

The Section's computations for control surveys now include, for least squares adjustments a modified version of the COSMOS (Computation of Survey Material on the Spheroid) computer program, in addition to the GROOM (General Reduction of Observed Material) program.

By continued co-operation with Topographical Surveys, Department of Energy, Mines and Resources, Ottawa, additional nets of control monuments with geodetic values have been established in the Windsor area and in the Niagara Peninsula. These monuments are linked to the existing Toronto-Hamilton networks and will provide a basis for co-ordinate control surveys which have proved beneficial to the Department.

Appendices to this report give details of controlled-access highway designations and assumptions, designations, reversions and transfers of sections of the King's Highway, secondary highways and tertiary road systems.

PROPERTY SECTION

H. F. Gilbert, Superintendent

The Property Section develops and formulates policies and procedures for acquiring property and property rights required for highway purposes and supervises the settlement of claims arising from such acquisition. It also supervises the management and disposition of land and buildings surplus to highway requirements.

Late in 1968 the new Expropriations Act 1968-69 was put into effect. This Act provided for improved treatment of property owners when their land was expropriated, or needed for public purposes. Since the enforcement of this new legislation, the Department has attempted to purchase most of its requirements by deed. This results in very few expropriations. Although we purchase the majority of our requirements by deed, the owner is entitled to the same rights and compensation as if he were expropriated under the New Act.

During the year, 2,942 new arrangements were negotiated. The carry-over from the previous year of 1,001 unpaid agreements added to the number of new agreements made a total of 3,943 to be paid. Of this total, 3,109 were paid with a value of \$15,972,916. Additionally, expenditure on the Sudbury, Brantford, Niagara Falls, Kitchener-Waterloo, E.C. Row, and Lakehead Expressways of \$1,609,560 raised the amount to \$17,582,476. At the close of the fiscal year, there were 4,170 property owners with whom agreements had not been negotiated compared with 4,155 last year at the same time. Requests to purchase property involving 3,293 new owners were received during the year compared to property requests involving 4,171 owners in the previous fiscal year.

The purchase of property for the widening of the Macdonald-Cartier Freeway (Highway 401) from Highway 48 to 27 continues. A total of 32 properties including 13 buildings were purchased during the fiscal year, the expenditures involved being \$538,211. To date 654 properties, including 258 buildings have been purchased, at a cost of \$11,823,656.

A total of 244 buildings have been removed or demolished by the methods indicated below:

1. Invitation Tender	141
2. Public Auction	61
3. Demolition by Highway Contractor	13

4. Public Tender	21
5. Demolished under agreement	2
6. Direct Sale	6

When negotiations to acquire property reach an impasse, the property owner or the Department have the privilege of applying to the Board of Negotiation for a hearing. This hearing is informal and although the Board's recommendations are not binding on either party, 200 settlements have been secured out of 301 cases referred since November 1965.

Seventeen applications were made to the Ontario Municipal Board for determination of compensation which added to a carry-over of 35 making a total of 52 categorized as follows :

1. Appointments heard and awards made	7
2. Appointments heard and judgement reserved	1
3. Settlements made, applications or appointments cancelled	14
4. Appointments not yet heard;	3
5. Applications for which appointments not yet given	27
Total	52

Before purchase, all properties were appraised by D.H.O. appraisers. In addition, 192 appraisals were completed by independent fee appraisers.

At the close of the fiscal year, 3,075 properties, which were recorded as surplus to D.H.O. requirements, were under various stages of processing for disposal. Revenue from sale of surplus property totalled \$1,792,665 and revenue from leased properties amounted to \$327,305.

SERVICE CENTRES

The Section is responsible for administering the Department's policy regarding the selection, development, leasing and subsequent inspection of Service Centres and the selection of sites for future "Rest Areas" on controlled access highways.

At the conclusion of the 1968-69 fiscal year, seventeen Service Centres had been established on the Macdonald-Cartier Freeway. An additional two Centres were under construction in the Mallorytown area and their completion (May 1st, 1969) will conclude our present Service Centre program for the Freeway.

Service Centres continue to receive a high level of use from the travelling public and it is estimated that on an average, approximately one million people visit each site annually. To cope with these volumes, the majority of lessees have found it necessary to carry out an annual renovation and expansion program, particularly with regard to washroom facilities, sewage disposal systems, parking areas and dining room and take-out facilities. Certain lessees are also considering providing supplementary cafeteria operations to provide more rapid service during peak volume periods.

Nineteen picnic areas established adjacent to existing Service Centres on the Macdonald-Cartier Freeway and Highway 400 were open to the public and received extensive use during the summer of 1968.

Approval has been received to extend our Service Centre program to new Highways of controlled access design. Suitable sites are being selected and basic preliminary work initiated.

Personnel Branch

RECRUITMENT

During the period under review employment requirements were drastically reduced to approximately 50% of that of the previous fiscal year.

670 new employees were appointed to the probationary staff with 338 appointments processed by the Recruitment Office, Downsview and 332 by the District Offices. This compares with 556 in Downsview and 732 in District Offices last year.

Summer student employment during the fiscal year totalled 901 as compared to 814 in 1967.

Although recruitment of staff was considerably reduced, the internal transfer of employees was greatly increased to better utilize our staff strength.

Recruitment of professional staff was carried out at 14 Canadian universities where 174 prospective candidates were interviewed and 20 civil engineering graduates were ultimately hired.

With the proliferation of Community Colleges within this province it was necessary to establish suitable entry levels for their graduates. This department retained 13 from the Survey and Civil Technician and Technology disciplines during the period under consideration.

Work Force

At the end of the fiscal year the Department's work force was 11,685 which was distributed as follows :

	1968-69	1967-68	1966-67
Administration Division	275	241	238
Financial Branch	297	317	308
Services Branch	1,168	1,228	1,225
Planning Branch	405	450	403
Design Branch	770	788	750
Operations Branch	8,544	9,547	10,161
Personnel Branch	48	52	52
Legal Branch—	31	30	27
Electronic Computing Branch	123	123	108
Research Branch	24	23	18
Totals	11,685	12,799	13,290

Municipal Roads Division

The 1968 subsidizable expenditures by the municipalities increased by approximately \$19,562,000 over 1967 and by \$141,224,000 over 1959, as shown in the following table :

Expansion of Aid to Municipalities (in \$1,000's)

Year	Total Expenditure by municipalities	Subsidies under The Highway Improvement Act	Development Road expenditures	Total aid
1959	\$124,391	\$ 62,362	\$ 7,880	\$ 70,242
1960	140,438	70,444	8,135	78,759
1961	142,010	71,542	7,786	79,328
1962	151,686	76,231	7,718	83,949
1963	173,693	88,041	11,109	99,150
1964	198,155	97,300	14,455	111,755
1965	206,544	102,656	17,073	119,729
1966	239,870	117,387	18,334	135,721
1967	246,053	122,968	19,988	142,956
1968	265,615	132,406	22,879	155,285

SUBSIDIES SECTION

965 municipalities and 44 Indian reserves received subsidy under the Highway Improvement Act for expenditures made in 1968. The aggregate amounts were as follows :

	Road mileage	Approved appropriation	Approved expenditures	Subsidy
Metro Toronto				
Roads	367.6	\$ 42,000,000	\$ 34,429,925	\$ 17,214,962
Subway	—	12,000,000	4,669,133	1,556,378
Counties*	9,310.6	59,389,400	54,520,465	30,050,632
Townships**	49,137.5	88,585,560	82,819,611	48,626,312
Urbans	11,216.5	103,957,140	89,175,733	34,957,982
Totals	70,032.2	\$305,932,100	\$265,614,867	\$132,406,266

*Includes Suburban Commissions

**Includes boroughs, improvement districts and Indian reserves



Aerial view of Kitchener-Waterloo Expressway under construction.

METROPOLITAN TORONTO
(Part XII-A, The Highway Improvement Act)
(Municipality of Metropolitan Toronto Act)

An amendment to the Highway Improvement Act passed in 1963 authorized the payment of subsidy at the rate of 33½% on expenditures for subway right-of-way construction made on or after April 1st, 1964 on the Bloor-Danforth Subway and the extension of the Yonge Street Subway – expenditures approved and subsidies paid for this work since that date were as follows :

Year	Approved expenditure	Subsidy paid
1964.	\$17,375,569	\$ 5,791,856
1965.	10,402,103	3,467,367
1966.	17,506,084	5,835,361
1967.	5,900,072	1,966,691
1968.	4,669,133	1,556,378
Totals	\$55,852,961	\$18,617,653

Under the Municipality of Metropolitan Toronto Act, the municipality claimed subsidy for the year on the following expenditures.

	Construction	Maintenance	Total
Roads (winter control excepted)	\$25,158,739	\$ 4,541,482	\$29,700,221
Bridges and culverts	821,186	297,846	1,119,032
Winter control	—	3,610,672	3,610,672
Total approved expenditures	\$25,979,925	\$ 8,450,000	\$34,429,925

Under the Highway Improvement Act and the Municipality of Metropolitan Toronto Act, the following major works in Metropolitan Toronto and the area municipalities being the five boroughs of Etobicoke, Scarborough, York, East York ; and the City of Toronto, were completed in 1968.

	Municipality of Metropolitan Toronto	Area municipalities
Subway construction	6.2 miles	0 miles
Expressway	0.5 miles	0 miles
New roads constructed	0 miles	3.4 miles
Existing roads reconstructed	1.0 miles	36.6 miles
Existing roads widened	15.6 miles	14.7 miles
Structures	4.0 miles	6.0 miles
Structures widened	1.0 miles	0 miles
Resurfacing	12.0 miles	58.5 miles

With respect to Expressway and Subway Construction, the F. G. Gardiner Expressway is in operation from the Humber River to Leslie St. ; the Don Valley Parkway is in operation from the Gardiner Expressway to Sheppard Ave. (N. of Hwy. 401) and the Spadina Expressway is in operation from Lawrence Ave. to Wilson Ave. (N. of Hwy. 401). The Bloor- Danforth Subway is in operation east and west from Yonge St. to Warden Ave. and Islington Ave. terminals respectively. Work on the Spadina Expressway is continuing south from Lawrence Ave. and on the Yonge St. Subway Extension.

COUNTY ROADS
(Part VII, The Highway Improvement Act)

The 1968 expenditures on county and suburban roads showed an increase over 1967 figures of more than \$3,460,000 or a percentage increase of approximately 7%. Construction expenditures increased by 6½% and maintenance expenditures by 7½%. Winter control expenditures showed an increase of approximately \$187,000.

A Breakdown of the 1968 expenditure follows :

	Construction	Maintenance	Total
Roads (winter control excepted)	\$29,228,539	\$11,869,638	\$41,098,177
Bridges and culverts	8,775,370	378,469	9,153,839
Winter control	—	4,268,449	4,268,449
Total approved expenditures	\$38,003,909	\$16,516,556	\$54,520,465

Some understanding of the magnitude of the work represented by these figures can be gained from the following summary of the work performed by the counties and suburban commissions.

Construction

1. Roads

430.2 miles completed at a total average cost of \$66,482 per mile

2. Bridges and culverts

(a) Bridges (20' span and over)

58 bridges completed at a total average cost of \$26.56 per square foot of deck area.

(b) Structures (under 20' span)

Total number completed 91

(c) Pipe Culverts installed 2,761

Maintenance

Operation	Miles maintained	Average direct cost per mile
1. Roadside maintenance	8,990	\$ 212
2. Hard top maintenance	6,801	509
3. Loose top maintenance	2,189	1,084
4. Winter control	8,990	410
5. Safety devices	8,990	101
6. Bridge and culvert maintenance	8,613	45

The above maintenance operations are defined as follows :

1. Roadside Maintenance

includes shoulder and ditch maintenance, catch-basin maintenance, storm sewer maintenance, curb and gutter maintenance, drainage assessments, weed and brush cutting and spraying, tree planting, isolated pole relocations, sodding and seeding of erosion areas and other incidental maintenance operations not included elsewhere.

2. Hard Top Maintenance

includes all work on bituminous and concrete surfaces.

3. Loose Top Maintenance

includes all work on gravel and stone surfaces, such as dragging application of prime or calcium, oiling, gravelling and spray patching on prime surfaces.

4. Winter Control

includes snow plowing, snow removal, sanding, salting, snow fence and spring cleanup.

5. Safety Devices

includes signs, guide rail zone painting and railway crossing protection.

6. Bridge and Culvert Maintenance

includes all repairs to bridge and culverts.

Regional Municipality of Ottawa-Carleton

The Regional Municipality of Ottawa-Carleton consisting of the cities of Ottawa and Vanier, three village municipalities and eleven township municipalities, was incorporated effective January 1st, 1969. The County of Carleton and the Ottawa Suburban Roads Commission ceased to exist effective the same date.

A needs study of the Regional Municipality of Ottawa-Carleton road system commenced in 1968 prior to the commencement of construction and maintenance activities in 1969.

Approved expenditure and subsidy paid for work carried out during 1968 was as follows :

Expenditure	Subsidy
\$20,000	\$15,000



Aerial view of Ottawa Queensway.

CITIES, TOWNS AND VILLAGES

(Part X, The Highway Improvement Act)

33 cities, 6 separated towns, 146 towns and 155 villages received aid under this part of the act of 1968. The expenditures made by these 340 road authorities showed an increase over 1967 expenditures of approximately \$12,935,000 with a corresponding increase of government subsidy of approximately \$4,760,200.

A breakdown of the 1968 expenditure follows :

	Construction	Maintenance	Totals
Roads (winter control excepted)	\$47,105,152	\$25,963,629	\$73,068,781
Bridges and culverts	3,768,952	718,487	4,487,439
Winter control	—	11,619,513	11,619,513
Total approved expenditures	\$50,874,104	\$38,301,629	\$89,175,733

A chronological summary of urban expenditures and provincial aid, and a table of street mileages by type of surface is included in the appendix.

COUNTY SUBURBAN ROADS

(Part VIII, The Highway Improvement Act)

Thirty-five cities and separated towns in the Province have joined their neighboring counties to form suburban roads commissions. These commissions have assumed portion of the county road systems of special interest to the cities and separated towns. Their 1968 mileages, expenditures and government aid are shown below.

County	Suburban Commission	Mileage	Approved expenditure	Government subsidy
Brant	Brantford	65.4	\$ 357,740	\$ 200,923
Carleton	Ottawa	138.4	1,359,137	696,231
	Eastview	2.6	cr. 11,018	cr. 5,509
Elgin	St. Thomas	19.0	70,344	35,989
Essex	Windsor	117.9	657,782	338,056
Frontenac	Kingston	22.5	353,702	221,885
Grey	Owen Sound	24.7	92,234	51,096
Hastings	Belleville	17.7	100,337	50,830
Kent	Chatham	31.5	138,391	77,605
Lambton	Sarnia	26.3	263,520	135,641
Lanark	Smiths Falls	11.0	14,928	7,470
L & G	Brockville	17.6	56,391	28,195
	Gananoque	6.7	6,495	3,245
	Prescott	6.1	12,368	6,184
	Smiths Falls	2.5	8,098	4,049
Lincoln	St. Catharines	53.7	200,313	110,570
Middlesex	London	70.6	829,626	536,222
N & D	Trenton	14.0	51,777	25,952
Ontario	Oshawa	42.4	449,128	245,077
Oxford	Ingersoll	7.3	12,430	6,265
	Woodstock	8.3	20,280	10,225
Perth	St. Marys	6.0	16,717	8,355
	Stratford	22.6	106,074	57,123
Peterborough	Peterborough	27.1	199,684	100,842
Simcoe	Barrie	20.0	75,785	40,433
S.D. & G.	Cornwall	61.0	161,644	83,118
Waterloo	Galt	33.9	167,493	85,315
	Kitchener	60.1	434,212	222,855
	Waterloo	30.1	138,643	70,788
Welland	Niagara Falls	27.8	269,554	142,321
	Port Colborne	6.4	80,472	40,571
	Welland	17.2	277,933	142,445
Wellington	Guelph	37.9	188,164	97,871
Wentworth	Hamilton	164.6	1,131,170	617,830
York	Toronto and York Roads	204.2	3,510,092	1,808,775
	Totals	1,425.1	\$11,801,640	\$ 6,304,866

INCORPORATED TOWNSHIPS

(Part IX, The Highway Improvement Act)

Five boroughs, 562 townships, 18 improvement districts and 44 Indian reserves received aid under this part of the act in 1968. The expenditures made by these 629 road authorities showed an increase over 1967 expenditures of approximately \$9,117,000 with a corresponding increase of Government subsidy of approximately \$5,419,000. Road expenditures increased by approximately \$7,000,000.

A breakdown of the 1968 expenditures follows :

These expenditures provide for the following major items of work :

1. Roads

2. Bridges and culverts

Culverts (under 10' span) : concrete—65 ; steel—350 ; timber—21

3. Pipe culverts installed	7,264
--------------------------------------	-------

1. *Surface and drainage:*

Resurfacing

2. Winter control

3. Weed and Brush control

4. Bridges repaired	471
-------------------------------	-----

Culverts repaired	5,051
-----------------------------	-------

DEVELOPMENT ROADS

Counties, townships, and towns and villages in the territorial districts are eligible for development road assistance.

The development road benefits to county road systems have been part of the 1965-69 County Road Program. At the end of the fiscal year, some 820 miles of county road had been or were the subject of development road designations for pre-engineering and construction.

\$22,879,317 was spent on 211 development road designations applying to 1,107.1 miles of roads under the jurisdiction of eligible municipalities. During the fiscal year 50 projects covering 250.8 miles of road were completed and 21 new designations on 84.7 miles of road were made.

Locations, mileages and expenditures on development roads are listed in the appendix.

ROADS IN TERRITORY WITHOUT MUNICIPAL ORGANIZATION

(Part XII, The Highway Improvement Act)

Assistance to local roads boards, statute labor boards and groups of settlers is rendered under this part of the Act.

The amount of contribution to statute labor boards was at least equivalent to the value of the statute labor. Local roads boards benefit from a contribution of twice the amount of assessed value of the land in the local roads area. During the year 156 local roads boards were operating and 18 applications for new boards were processed.

The distribution of aid by districts is listed in the following table :

SUMMARY OF UNINCORPORATED TOWNSHIPS EXPENDITURES IN THE FISCAL YEAR 1968-69

Municipal District	Value of statute labor, local roads or other work performed	Direct expenditure on roads by Department	Total value of work performed	Percentage of aid by Department
5 Muskoka	\$ 21,000	\$ 20,078	\$ 41,078	49
10 Nipissing	5,662	32,553	38,215	85
11 Nipissing, Muskoka and Parry Sound . .	76,543	199,787	276,330	72
13 Nipissing, Sudbury and Parry Sound . .	150,421	412,792	563,213	73
14 Timiskaming, Sudbury and Cochrane South	71,490	123,955	195,445	63
16 Cochrane North and Cochrane South . .	57,693	162,378	220,071	74
17 Sudbury, Pt. of Algoma, Pt. Parry Sound, and Pt. Manitoulin	113,407	279,315	392,722	71
18 Algoma	35,257	139,948	175,205	80
19 Thunder Bay	82,670	311,904	394,574	79
20 Kenora and Rainy River	90,173	150,674	240,847	63
Totals	704,316	\$1,833,384	\$2,537,700	72

MUNICIPAL STUDIES SECTION

1. Township Programming Studies

During the fiscal year, work was carried out on 18 programming studies. Seven of these studies were completed and reports published, namely :

Clark	King
Darlington	Manitoulin Island Indian Reserve
Dover	Morley
Esquesing	

The remaining eleven studies are being carried out in the following townships and are in various stages of completion :

Caradoc Indian Reserve	Moore
Cornwall	Oneida Indian Reserve
Enniskillen	Pickering
Harwich	Russell
Innisfil	Winchester
Mersea	

2. *Urban Roads and Services Programming Studies*

Work has progressed on the pilot studies undertaken in the Town of Port Hope and the Township of Saltfleet, and final reports are expected on these studies during the fiscal year 1969-70.

3. *Municipal Road and Street Maintenance Management Study*

In May, 1968, the final report of the first phase of this study was printed and given wide distribution. In September, 1968, work commenced on the second phase in the city of Oshawa and the County of Ontario. In these test municipalities the results of Phase I and the DHO Maintenance Management Study are being used to develop a Maintenance Management System that will be applicable to the larger municipalities in the Province.

PLANS APPROVALS

The plans approved by the Department during the year were as follows :

Development Roads—	84 Plans covering 358.70 miles of road
Bylaw	161 Plans covering 245.70 miles of road
Total	245 Plans covering 604.40 miles of road

There was a substantial increase in plans and mileage over 1967 submissions and the standard of plans received was higher and more uniform than in the past which indicates that the consulting firms and municipalities are more familiar with our requirements.

Bylaw plans are approved by the District Municipal Engineer unless there is some controversial or substandard feature requiring head office approval.

Development road plans and contract documents are approved in head office and most of this work is done by consulting engineers who also supervise construction on jobs which they pre-engineer. The high and uniform level of pre-engineering, plan preparation and supervision is reflected in the improved quality of municipal road construction.

Highway Safety

During the 1968 calendar year, Ontario had a registration of 2,862,981 motor vehicles, an increase of 132,997 or 4.9% over the previous year. They were driven on 93,000 miles of highways, roads and streets by more than 3 million drivers of varying degrees of skill and judgement. These motorists in 1968, drove an estimated 26 billion, 700 million vehicle miles, an increase of 6.6% as compared to the 1967 total.

Approximately 12 billion miles were recorded in 1968 by motorists travelling the King's Highway system, about 48% of the total mileage driven in the Province. Travel on 700 miles of controlled access highways; the Queen Elizabeth Way, 400-401, etc., accounted for 17% of the provincial total and 33% of the total miles travelled on all highways in Ontario, exclusive of Secondary Highways.

In 1968, Ontario had 155,127 traffic collisions reported by the police to the Department of Transport. The King's Highways, exclusive of Secondary Highways, accounted for 31,940 collisions or 20.6% of the Provincial total.

Fatal traffic collisions in the Province showed a decrease of 54 or 3.9% over 1967, while there was also a decrease in traffic deaths. The 1,346 fatal collisions in 1968 resulted in 1,586 deaths. In 1967, the 1,400 fatalities accounted for 1,719 deaths.

The King's Highway system, exclusive of Secondary Highways, recorded 770 deaths, a result of 627 fatal collisions. There was evidence of drinking in 34.8% of these collisions. Single-vehicle type fatalities (194) accounted for 31.1% of the highways' (627) total. Drinking drivers were involved in 44.3% of the 194 fatal collisions which resulted when the vehicle went off the road or struck a fixed object on the King's Highways.

In 1968, the vehicle collision rate for all Ontario was 5.8, based on the number of reportable traffic collisions per one million vehicle miles travelled. The rate for the King's Highway system, exclusive of Secondary Highways, was 2.7 while the controlled access highways had a collision rate of 1.8; a slight increase over the 1.6 rate for 1967. This compares with a collision rate of 1.3 for 1968 for all toll roads, turnpikes and expressways in the United States.

The Provincial fatal traffic collision rate in 1968 for all highways, roads and streets was 5.0—the number of fatalities per 100 million vehicle miles of travel. The rate was 5.3 for the King's Highway system.

In 1968, Ontario's 700 miles of controlled-access highways had a 2.6 fatal collision rate and a 3.2 fatality or death rate. The United States recorded a 2.7 death rate for its toll roads and turnpikes.

The Department of Highways continued to provide every cooperation to the Ontario Provincial Police Air Patrols, which in 1968 covered 1,548 miles of King's Highways as compared to 1,533 in 1967 and 822 in 1966. The operational administration comes under the direct command of the OPP Traffic Division and the Department has shouldered the heavy burden of measuring and marking those sections of highways having a high collision rate. Traffic collision statistics were prepared by the Department for sections of highways having a high frequency of collisions resulting from speeds and other traffic violations.

In 1968, during the period May through November, a total of 13,173 hazardous moving traffic violations were observed on the highways by the OPP, resulting in appropriate charges of speeding, careless driving, etc. In addition, 16,056 warnings were given.

During the fiscal year 1967-68 the Office of the Supervising Coroner for Ontario forwarded seventy-three Coroner's Inquest Reports to the Traffic and Planning Studies Division where recommendations were made by juries that the Department carry out certain improvements where fatal accidents have occurred on King's Highways. The findings and recommendations were given every consideration, and reports prepared by our Regional and District engineers, etc.

Traffic Seminars were conducted throughout the Province in cooperation with the Ontario Provincial Police. These meetings have been informative and of particular value to our Regional and District officials. Informal discussions with several hundred members of the OPP and Municipal Police departments have resulted in many studies being carried out on the King's Highways, at locations considered accident prone or where certain driving hazards exist.

Motor vehicle accident statistics were compiled for presentation as highway safety evidence at Ontario Municipal Board Hearings, in the matter of applications by the Minister for approval of the closing of certain roads intersecting controlled-access highways.

**HIGHWAY TRAFFIC COLLISION STATISTICS
FOR ONTARIO AND UNITED STATES
YEARS 1966-1968**

	1966	1967	1968
Collision Rate			
All Ontario	5.9	5.8	5.8
King's Highways — exclusive of Secondary Hwys.	2.6	2.6	2.7
Controlled-Access Highways in Ontario	1.6	1.6	1.8
Toll Roads, Turnpikes, Expressways — <i>United States</i>	1.2	1.3	1.3
Fatal Collision Rate			
All Ontario	5.7	5.6	5.0
King's Highways — exclusive of Secondary Hwys.	5.6	5.3	5.3
Controlled-Access Highways in Ontario	2.6	2.3	2.6
Death Rate			
All Ontario	6.7	6.9	5.9
King's Highways — exclusive of Secondary Hwys	7.0	6.9	6.6
Controlled-Access Highways in Ontario	3.0	2.9	3.2
Toll Roads, Turnpikes, Expressways — <i>United States</i>	2.8	2.3	2.7
Inter-State Highways — <i>United States</i>	3.1	2.9	2.9

Special Reports

MINING, ACCESS AND RESOURCES ROADS

Under the Federal-Provincial Road-to-Resources Agreement, in which Ontario shared costs with Ottawa, the following projects were undertaken :

District	Location	Year Begun	Total Miles	Miles Compl.
New Liskeard	Foleyet West	1958	34.0	34.0
Sudbury	Flack Lake Road	1963	38.0	10.5*
Sault Ste Marie	Chapleau East	1958	26.0	26.0
Fort William	Nakina to Terrier Lake	1959	47.0	47.0
	Savant Lake to Hwy 17	1959		
	Hwy 17 to vicinity of Cheeseman Lake			
	Central Patricia northerly to 10 miles north of			
	Otoskwin R.	1959	74.5	74.5
Kenora	Minaki South	1962	47.0	47.0
		1959	21.5	21.5
			367.6	340.1

*Clearing Right-of-Way only

In the latter part of 1968, the body mentioned above was re-named The Northern Ontario Transportation Committee and the Federal-Provincial Agreement terminated. The new committee comprised The Ministers and Deputy Ministers of Energy and Resources, Highways, Lands and Forests, Mines, Tourism and Information, Transport, Treasury and Economics.

A Secretariat, in which all these departments were represented, was named to assist. The following new projects have since been completed :

1. Central Patricia northerly—grading for 15 miles to 2 miles north of Central Patricia.
2. Highway 800 to Armstrong, Hurkett Road—6.5 miles of grading plus an additional 10.82 miles of clearing.
3. Balmertown northerly—grading completed for 8.77 miles plus an additional 7 miles of clearing.

Total expenditure was \$1,146,142.

Under a cost sharing agreement contributions were made to the access roads of Agnew Mines Ltd., Extender Minerals of Canada Ltd., Tribag Mining Co. Ltd., Upper Beaver Mines Ltd., and Thunder Bay Amethyst Mining Co., Ltd., at an outlay of \$97,627.



Grading and filling Resources Road 70 miles north of Patricia.

CONTRACT CONTROL

TYPES OF WORK CONTRACTED FOR AND CONTRACT TOTALS

Construction	
Concrete paving	1
Grading and hot mix (85 structures included)	79
Grading and culverts	23
Hot mix paving	3
Structures	8
Miscellaneous	65
	179
Maintenance	
Prime dust layer	9
Crushed gravel	49
Hot mix patching	24
Surface treatment	9
Winter sanding	15
Screened sand	14
Bridge painting	13
Calcium chloride apply	9
Resurfacing	9
Mowing	12
Miscellaneous	1
	164

CONSTRUCTION OF THE TRANS-CANADA HIGHWAY

Grading this year totalled 28 miles, compared with 34 the previous year. Paving completed totalled 19 miles, as against 23 in 1967-68. One structure was built, near Fort William.

Total work completed to end of year was :

Grading and Culverts	1,334.55 miles
Bituminous Hot Mix Pavement	1,237.30 miles
Permanent Bridges and Structures	181



The Trans Canada (Highway 17) west of Borup's Corners.

ENGINEERING AUDIT OFFICE

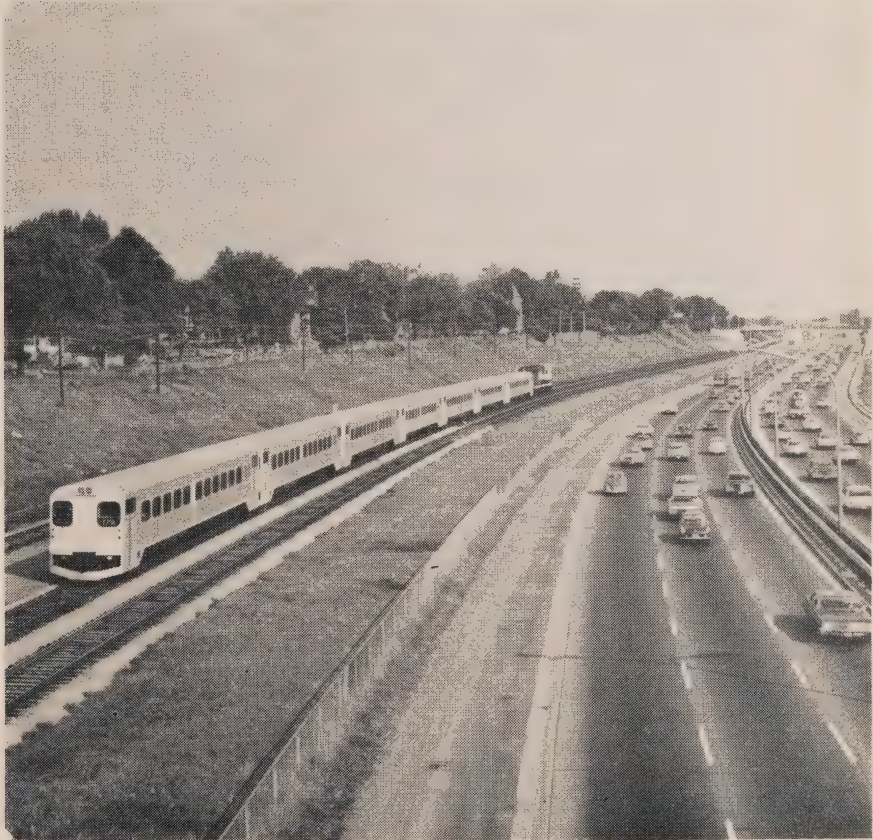
During the Fiscal Year 1968-69, 424 Field Audits were performed, 429 Office Audits, and 2,225 Weighing Audits.

As part of a new policy of closer control of subsidized spending in the Municipalities, a large number of Audits were conducted on a variety of By-Law Subsidy Projects. These Audits are intended primarily to determine the methods of control and supervision presently exercised by the Municipalities and to recommend any necessary changes.

The following table lists by Districts, the number of Capital, Maintenance, and Invitation Bid contracts Audited, with their total monetary value for the Fiscal Year 1968-69. Also listed, are the number of final Audits (by Districts) carried out on Development Road, Connecting Link Contracts in 1968-69.

District	Construction		Maintenance		Invitation Bids		Dev. Roads	Conn. Links
	No.	Value	No.	Value	No.	Value		
Chatham	11	3,319,844.09	10	214,843.54	2	9,874.85	1	1
London	10	2,200,769.74	5	260,301.43	2	23,095.74	0	2
Stratford	9	918,371.09	9	154,197.27	1	9,752.72	3	5
Hamilton	17	13,076,257.51	17	1,898,783.80	4	70,338.45	6	2
Owen Sound	8	2,275,550.26	11	689,968.61	0	Nil	6	9
Toronto	27	28,880,140.71	23	2,175,876.36	7	335,956.25	4	3
Port Hope	11	5,290,111.48	13	592,356.53	1	7,822.22	19	4
Kingston	12	4,968,391.94	9	338,877.02	2	19,568.67	17	7
Ottawa	9	2,885,981.66	9	285,471.93	3	85,148.40	27	7
Bancroft	12	3,073,510.56	7	220,361.27	2	18,310.66	7	1
Huntsville	9	3,572,152.86	7	145,562.57	0	Nil	1	0
North Bay	7	2,192,972.83	2	45,949.87	0	Nil	3	1
New Liskeard	9	1,932,476.58	7	190,052.78	0	Nil	0	0
Cochrane	2	785,368.33	4	115,232.90	0	Nil	0	0
Sudbury	8	2,922,192.29	6	200,260.19	0	Nil	1	1
Sault Ste. Marie	8	3,052,484.83	8	171,194.17	0	Nil	1	1
Thunder Bay	16	6,798,747.17	6	343,952.46	2	19,403.38	0	0
Kenora	7	2,589,523.04	1	53,278.04	0	Nil	0	0
Totals	192	90,734,846.97	154	8,096,520.74	26	599,271.34	96	44

COMMUTER RAIL DIVISION



A speedy GO Train passes motor traffic on Toronto's Gardiner Expressway.

During the year ending March 31, 1969, GO Transit carried a total of 4,666,800 passengers. This represented an increase of 6 percent over a comparable period in the preceding year. To cope with the increasing number of passengers being handled during the peak hours, fourteen new coaches were ordered from Hawker Siddeley Canada Ltd., and delivered during October and November.

A new Canadian National Exhibition station was opened by GO Transit in the fall of 1968. It is located inside the grounds near the Coliseum and replaces the old Dufferin Street station which had been used for many years to serve the CNE. The number of CNE trips handled by GO Transit increased by 75%, from 130,000 in 1967 to 228,000 in 1968.

Financial Branch

The following statements outline the expenditure and cash receipts of the Department of Highways, Ontario for the year ended March 31, 1969.

- I. Ordinary Expenditure
- II. Capital Payments, including Expenditure Summary
- III. Trans-Canada Highway
- IV. The "Queensway" — Ottawa
- V. Receipts
- VI. Burlington Bay Skyway
- VII. Garden City Skyway
- VIII. Comparison of Average Unit Prices Paid on Contracts

Total Expenditure

The "Expenditure Summary" (Statement II) sets out total ordinary expenditure and capital payments at \$438,640,541. The following is a comparison of total expenditure with previous years.

1964	\$280,476,989	1967	\$390,567,594
1965	299,036,127	1968	423,026,272
1966	336,146,806	1969	438,640,541

Trans-Canada Highway Agreement

Expenditure of the Department under this agreement

is shown in Statement III in the amount of	\$259,734,089
with funds recovered or recoverable of	<u>125,470,430</u>
and a net cost to the Department of	\$134,263,659

Recoverable Expenditure

Within the fiscal year the Department recovered \$18,289,219, made up as follows:

Trans-Canada Highway	\$ 4,104,810
Ottawa Queensway: Government of Canada	—
City of Ottawa	<u>\$500,000</u> 500,000
Railway Bridges	<u>1,752,403</u>
Total of items detailed in Statement II	\$ 6,357,213
Ontario Department of Mines	1,165,753
Sundry items credited to expenditure or to revenue	<u>10,766,253</u>
	\$18,289,219

Pre-Qualification of Contractors

There were 191 capital contracts awarded during the year, of which 119, representing 62.3% of the total of 98.3% of the tender value, required the pre-qualification of contractors. Of the 152 ordinary contracts awarded during the year 77, or 50.7% representing 86.1% of the tender value, required pre-qualification. An average of 5.8 bids was received on pre-qualified contracts as compared with 3.7 bids on unqualified contracts.

Indexes of Tender Prices Paid on Road Contracts and for Materials

To illustrate the trend of prices paid this year in relation to previous years, the following charts show:

Index of Tender Prices Paid on Road Contracts (Chart I).

Index of Tender and Material Prices (Chart II).

CHART I
TENDER PRICE INDEXES

Arithmetic Rebasement from:
1950 51 = 100 to 1960 61 = 100
Weight given each item
Cost of such item in relation to all items
for Fiscal Year 1964 65

..... Grading
----- Paving
----- Structure
----- Composite

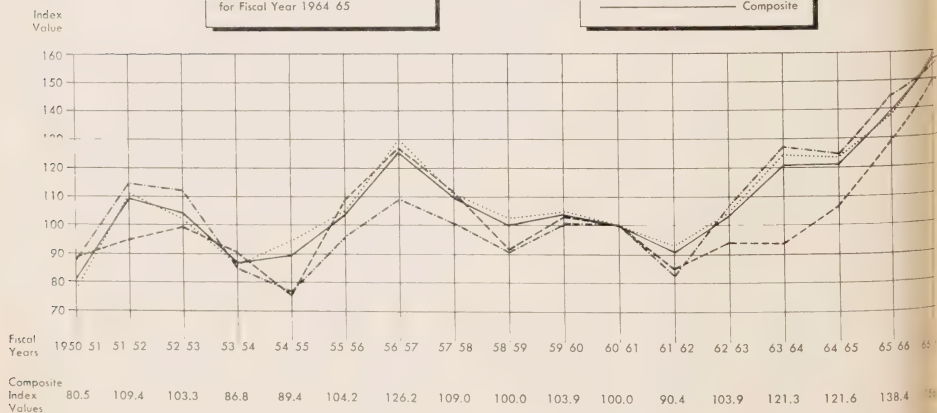
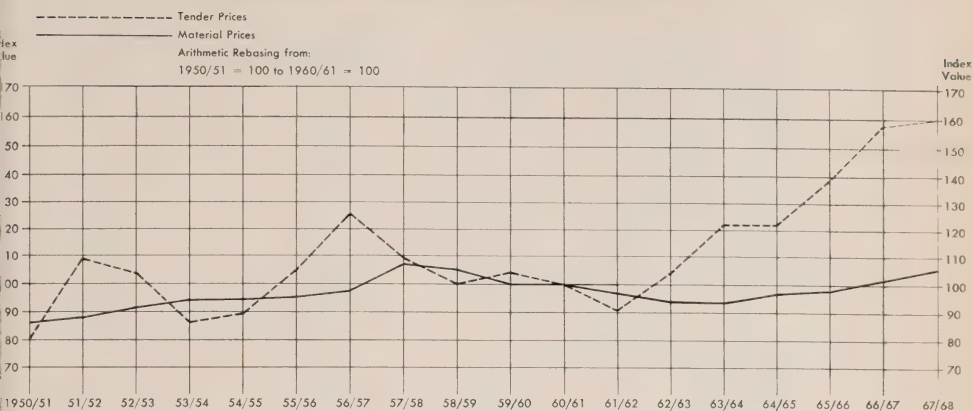


CHART II
COMPARISON OF TENDER AND MATERIAL PRICE INDEXES



STATEMENT I

Ordinary Expenditure

For the Fiscal Years Ending March 31, 1969 and March 31, 1968

	Year ending March 31/69	Year ending March 31/68
Maintenance of King's Highways and Secondary Highways—		
Winter Maintenance—		
Contract and day labour	\$ 23,304,600	\$ 23,791,286
Equipment Operating costs due to standby (60%)	1,485,081	1,032,299
Summer Maintenance—		
Patrol costs	16,076,433	14,724,875
Gravel crushing—contract and day labour	1,069,540	1,268,218
Prime—contract and day labour	688,867	515,268
Hot Mix Patching—contract and day labour	1,550,692	1,486,396
Surface treatment—contract and day labour	598,835	525,600
Mulch—day labour	236,252	202,356
Major bridge repairs	474,086	315,932
Equipment operating costs due to standby (40%)	990,054	688,199
Operation of ferries	930,102	832,627
Flood and other emergencies	63,287	74,790
District Office Overheads, including engineering, warehouse and municipal	11,274,112	10,019,189
Expenditures recovered but credited to revenue	414,407	299,216
Increase (Decrease) in inventories	138,828	107,968
Repaying of present roads	2,619,803	2,550,254
Maintenance of development roads	130,100	288,487
Maintenance of roads in Unincorporated Townships in Northern Ontario	1,151,288	1,049,587
Building repairs	438,351	392,403
Total (see Appendices 1 and 7 for distribution of above expenditures by counties, roads, etc.)	\$ 63,634,718	\$ 60,164,950

	Year ending March 31/69		Year ending March 31/68	
General Operating Expenditures—				
Purchase of new trucks, tractors, graders, plows and other road equipment	\$ 5,212,910		\$ 3,549,992	
Printing and Stationery	1,105,746		1,066,512	
Office furniture and equipment	479,416		348,890	
Workmen's compensation	326,749		270,266	
Insurance and Claims	374,962		349,947	
Unemployment Insurance	95,628		121,997	
Maintenance of Buildings and area office rentals	213,754		224,691	
Teletype rentals	80,129		74,084	
Staff training	51,029		75,622	
Recoverable expenditures (net)	25,997		(14,837)	
Central Stores increase (decrease) in stock . .	<u>42,625</u>	8,008,945	<u>19,415</u>	6,086,579
Head Office—				
General administrative and operating staff salaries	\$ 6,878,945		\$ 6,156,391	
Travelling expenses	317,992		316,799	
Electronic Computing Branch salaries, expenses and equipment rentals	2,128,037		1,721,529	
Sundry	<u>1,280,601</u>	10,605,575	<u>1,217,467</u>	9,412,186
		178,799		201,860
Roads Publicity, etc.				
Burlington Bay Skyway toll collection costs . .	\$ 285,107		\$ 281,143	
Garden City Skyway toll collection costs . . .	<u>218,460</u>	503,567	<u>209,097</u>	490,240
		2,676,951		3,629,533
GO Transit				
Municipal Subsidies—				
County Roads	\$ 8,375,816		\$ 7,789,846	
Township Roads	17,683,715		16,781,535	
Cities, towns and villages:	<u>23,647,601</u>	49,707,132	<u>21,043,374</u>	45,614,755
Total Ordinary Expenditures		<u>\$135,315,687</u>		<u>\$125,600,093</u>

PER PUBLIC ACCOUNTS

Total Ordinary Expenditures per Public Accounts	<u>\$135,315,687</u>	<u>\$125,600,093</u>
---	----------------------	----------------------

STATEMENT II

Capital Payments

For the Fiscal Years Ending March 31, 1969 and March 31, 1968

	Year ending March 31/69	Year ending March 31/68	
Construction of King's Highways and and Secondary Highways—			
Payments to Contractors	\$ 98,815,294	\$103,826,194	
Materials and Sundry Contract expenditures	39,561,019	40,510,939	
Engineering	13,903,815	14,740,813	159,077,946
Construction of Development Roads	22,749,217		19,699,799
Construction of roads in Unincorporated Townships in Northern Ontario	722,685		665,300
Expenditures allocated to the above roads—			
Property purchase	\$ 17,582,476	\$ 20,996,755	
Land Surveys	2,443,958	2,461,872	
Planning	—	1,609,176	
Design	—	7,163,901	
Buildings	1,279,853	1,924,034	34,155,738
Total (see Appendices 1 and 7 for distribution of above expenditure by Counties, Roads, etc.)	\$197,058,317	\$213,598,783	
Expenditures of Head Office branches unallocated and not included above:			
Right-of-Way Office	\$ 1,507,145	\$ 1,320,885	
Land Surveys	2,261,178	1,923,779	
Planning	5,103,984	3,310,523	
Design	9,971,946	2,747,184	
Program	438,928	—	
Buildings	8,388	15,167	
Materials and Testing	3,828,945	3,613,114	
Engineering Audit	1,087,889	935,205	
Increase (decrease) in Bailey Bridges and steel inventories	19,249	38,850	
Net recoverable expenditures debit (credit)	(4,965,035)	(5,472,743)	
Sundry	550,932	506,066	8,938,030

	Year ending March 31/69	Year ending March 31/68
GO Transit	10,111,067	5,085,048
Municipal Subsidies:		
County Roads	\$ 21,674,816	\$ 20,229,456
Township Roads	17,725,898	17,051,707
Cities, Towns and Villages	43,298,420	40,071,640
	82,699,134	77,352,803
Total gross capital payments on construction	\$309,682,067	\$304,974,66
Less Recoveries:		
Trans-Canada Highway	\$ 4,104,810	\$ 3,805,292
Ottawa Queensway—		
Government of Canada	—	258,246
City of Ottawa	500,000	1,500,000
Railway Bridges	1,752,403	1,984,947
	6,357,213	7,548,485
Net capital payments per public accounts	\$303,324,854	\$297,426,179

EXPENDITURE SUMMARY

Ordinary expenditures	\$135,315,687	\$125,600,093
Capital payments, net	303,324,854	297,426,179
	\$438,640,541	\$423,026,272
Totals	\$438,640,541	\$423,026,272

STATEMENT III

Trans-Canada Highway

The following statement sets out expenditure and amounts recoverable on the Trans-Canada Highway from the inception of the agreement with the Government of Canada on April 24, 1950.

	Refundable by Government of Canada	Expended by Department
Refunded by the Government of Canada on account of work performed prior to April 24, 1950	\$ 1,569,640	\$ —
Year ending March 31, 1951	2,749,329	7,043,559
Year ending March 31, 1952	3,453,866	8,242,801
Year ending March 31, 1953	4,103,753	11,746,130
Year ending March 31, 1954	2,486,860	9,686,452
Year ending March 31, 1955	6,274,487	5,675,343
Year ending March 31, 1956	3,365,959	9,602,299
Year ending March 31, 1957	4,855,053	13,996,280
Year ending March 31, 1958	12,381,361	20,683,306
Year ending March 31, 1959	15,803,757	27,995,777
Year ending March 31, 1960	17,662,423	28,412,552
Year ending March 31, 1961	16,500,840	24,786,757
Year ending March 31, 1962	11,623,549	16,168,477
Year ending March 31, 1963	3,958,997	8,164,528
Year ending March 31, 1964	2,990,783	6,784,073
Year ending March 31, 1965	2,617,937	5,591,696
Year ending March 31, 1966	2,536,827	6,432,938
Year ending March 31, 1967	2,290,907	7,329,474
Year ending March 31, 1968	3,805,292	14,884,817
Year ending March 31, 1969	4,104,810	10,942,649
Expenditure by Department for property and other non-recoverable expenditures	—	15,564,181
Total to March 31, 1969	\$125,136,430	\$259,734,089
Further claims to be submitted based on expenditures to March 31, 1969.		
Claim No. 192	200,000	
Claim No. 193	134,000	
Total Refunds by Government of Canada		125,470,430
Net Estimated Cost to March 31, 1969		\$134,263,659

STATEMENT IV

The Queensway — Ottawa

The following statement sets out expenditures and amounts recoverable on the "Queensway — Ottawa since the signing of the agreement with the Government of Canada, the Federal District Commission and the City of Ottawa, on March 19, 1957.

Expended by Department:

Year ending March 31, 1958	\$ 563,956
Year ending March 31, 1959	1,720,076
Year ending March 31, 1960	3,860,475
Year ending March 31, 1961	5,723,245
Year ending March 31, 1962	3,889,962
Year ending March 31, 1963	3,778,739
Year ending March 31, 1964	5,215,154
Year ending March 31, 1965	3,411,781
Year ending March 31, 1966	1,904,433
Year ending March 31, 1967	2,706,434
Year ending March 31, 1968	558,884
Year ending March 31, 1969	16,332

\$ 33,349,471

Recovered from Federal Government:

Year ending March 31, 1958	\$ 204,500
Year ending March 31, 1959	109,221
Year ending March 31, 1960	773,681
Year ending March 31, 1961	1,367,729
Year ending March 31, 1962	1,380,118
Year ending March 31, 1963	951,729
Year ending March 31, 1964	1,211,642
Year ending March 31, 1965	1,071,872
Year ending March 31, 1966	483,000
Year ending March 31, 1967	609,662
Year ending March 31, 1968	258,246
Year ending March 31, 1969	Nil

Total recovered from Federal Government	\$ 8,421,400
---	--------------

Recovered from the City of Ottawa	6,916,831
---	-----------

Amounted to be recovered from:

The City of Ottawa	\$404,716	
Federal Government under T.C.H. Contracts	931,789	1,336,505

Total recoveries		16,674,736
----------------------------	--	------------

Net Estimated Cost to March 31, 1969		\$ 16,674,736
--	--	---------------

STATEMENT V

Statement of Receipts

For the Fiscal Years Ending March 31, 1969 and March 31, 1968

	Year ending	
	March 31, 1969	March 31, 1968
Sale of land and buildings	\$1,953,959	\$ 301,278
Property rentals	2,272,725	1,645,788
Sale of services and materials	396,583	625,320
Permits — sign and housemoving	80,799	75,298
Gas line franchises	8,960	9,973
Burlington Bay Skyway	1,153,932	1,063,665
Garden City Skyway	712,164	692,846
Niagara Falls Parking	—	18,108
Miscellaneous	144,332	162,001
Total Receipts	\$6,723,454	\$4,594,277
Distribution		
Ordinary Revenue	\$4,693,006	\$4,232,378
Capital Receipts	2,030,448	361,899
	\$6,723,454	\$4,594,277

STATEMENT VI

Burlington Bay Skyway

Comparative Statement of Toll Collections, Revenues and Expenditures

For the Fiscal Years Ending March 31, 1969 and March 31, 1968

	Year ending March 31, 1969	Year ending March 31, 1968	Increase (Decrease)	Percentage
Revenues:				
Toll Revenue Earned:				
Class I vehicles	\$ 818,039	\$ 760,226	\$ 57,813	7.60
Class II vehicles	90,289	87,536	2,753	3.14
Class III vehicles	200,036	174,256	25,780	14.79
Total Revenue Earned	1,108,364	\$ 1,022,018	\$ 86,346	8.45
Plus-Tickets and Tokens sold but not presented and other net ad- justments	39,050	35,000	4,050	11.57
	\$ 1,147,414	\$ 1,057,018	\$ 90,396	8.55
Add: Premium U.S. Funds	6,518	6,647	(129)	(1.94)
Total Revenue	\$ 1,153,932	\$ 1,063,665	\$ 90,267	8.49
Direct Expenditures:				
Toll operating staff salaries	\$ 260,127	\$ 242,518	\$ 17,609	7.26
Travelling Expenses	733	3,346	(2,613)	(78.09)
Office Expenses	2,243	9,687	(7,444)	(76.85)
Light, heat, water, telephone, etc.	8,682	9,956	(1,274)	(12.80)
Maintenance of building	1,401	1,969	(568)	(28.85)
Maintenance of equipment	11,921	13,667	(1,746)	(12.78)
	\$ 285,107	\$ 281,143	\$ 3,964	1.41
Excess of Revenue over Expenditure	\$ 868,825	\$ 782,522	\$ 86,303	11.03
Traffic:				
Class I vehicles	9,913,846	9,026,128	887,718	9.83
Class II vehicles	553,842	526,784	27,058	5.14
Class III vehicles	1,193,662	1,030,430	163,232	15.84
Total	\$11,661,350	\$10,583,342	\$ 1,078,008	10.19

STATEMENT VII

Garden City Skyway

Comparative Statement of Toll Collections, Revenues and Expenditures
For the Fiscal Years Ending March 31, 1969 and March 31, 1968

	Year ending March 31, 1969	Year ending March 31, 1968	Increase (Decrease)	Percentage
Revenues:				
Toll Revenue Earned:				
Class I vehicles	\$ 568,894	\$ 555,833	\$ 13,061	2.35
Class II vehicles	46,373	47,821	(1,448)	(3.03)
Class III vehicles	85,066	73,948	11,118	15.03
Total Revenue Earned	\$ 700,333	\$ 677,602	\$ 22,731	3.35
Plus-Tickets and Tokens sold but not presented and other net ad- justments	(260)	3,058	(3,318)	—
	\$ 700,073	\$ 680,660	\$ 19,413	2.85
Add: Premium U.S. Funds	12,091	12,186	(95)	(0.78)
Total Revenue	\$ 712,164	\$ 692,846	\$ 19,318	2.79
Direct Expenditures:				
Toll operating staff salaries	\$ 197,547	\$ 185,543	\$ 12,004	6.47
Travelling Expenses	641	745	(104)	(13.96)
Office Expenses	4,805	6,428	(1,623)	(25.25)
Light, heat, water, telephone, etc.	8,459	8,543	(84)	(0.98)
Maintenance of building	1,484	3,269	(1,785)	(54.60)
Maintenance of equipment	5,524	4,569	955	20.90
	\$ 218,460	\$ 209,097	\$ 9,363	4.48
Excess of Revenue over Expenditure	\$ 493,704	\$ 483,749	\$ 9,955	2.06
Traffic:				
Class I vehicles	6,110,384	5,901,902	208,482	3.53
Class II vehicles	253,091	253,034	57	.02
Class III vehicles	475,438	410,850	64,588	15.72
Total	6,838,913	6,565,786	273,127	4.16
Toll Rates:				
			Cash	Tickets
Class I, Passenger vehicles and trucks having not more than two axles and a weight-carrying capacity of less than one ton15	.05
Class II, Class I vehicles drawing a trailer, and trucks having not more than two axles and a weight-carrying capacity of one ton or more25	.10
Class III, Class II vehicles drawing a trailer; trucks having three or more axles, and public vehicles45	.15

STATEMENT VIII

Comparison of Unit Prices on Contracts for Use in Tender Price Index
For Period April 1, 1950 to March 31, 1969

Fiscal year	Clearing acre	Grubbing acre	Earth excavation cu. yd.	Earth excavation grading cu. yd.	Earth excavation borrow cu. yd.	Rock excavation cu. yd.	Granular "A" ton	Granular "B" ton	% Crushed gravel "A" ton	% Crushed gravel "B" ton	Sand cushion ton	Earth compaction cu. yd.	Compaction equipment hour	Water for compaction m. gal	Concrete in culverts cu. yd.
1950/51	\$ 96.78	\$ 130.98	\$.36	\$ —	\$ —	\$ 1.42	\$.87	\$.90	\$ 1.06	\$.91	\$.56	\$.026	\$ —	\$ 6.19	\$ 20.65
1951/52	148.84	151.20	.54	—	—	1.78	1.51	1.32	1.43	1.03	.66	.032	—	7.50	28.57
1952/53	125.88	170.20	.39	—	—	1.64	1.38	1.40	1.43	1.30	.77	.029	—	6.74	22.22
1953/54	127.63	144.39	.37	—	—	1.27	1.17	1.02	1.34	1.02	.59	.027	—	6.24	23.14
1954/55	132.50	153.49	.40	—	—	1.73	1.15	1.19	1.30	1.13	.68	.027	—	6.05	22.06
1955/56	184.15	213.20	.44	—	—	1.81	1.28	1.46	1.34	1.28	.62	.035	—	5.69	26.13
1956/57	235.79	251.10	.60	—	—	2.43	1.48	1.62	1.41	1.38	.95	.045	—	6.44	32.11
1957/58	203.59	257.52	.45	—	—	2.14	1.34	1.30	1.33	1.33	.77	.044	—	5.39	27.56
1958/59	190.61	235.17	.40	—	—	2.08	1.26	1.36	1.18	1.17	.69	.042	—	4.48	25.05
1959/60	163.30	200.55	.41	—	—	2.01	1.35	1.29	1.16	1.28	.77	—	6.44	4.30	26.09
1960/61	162.63	207.19	.43	—	—	1.82	1.18	1.11	1.53	1.27	.68	—	6.65	3.75	24.62
1961/62	162.19	188.27	.36	—	—	1.77	1.21	1.08	1.07	1.13	.67	—	8.24	3.21	21.13
1962/63	201.68	197.17	.45	—	—	1.85	1.25	1.30	1.20	1.25	.69	—	9.50	3.25	25.79
1963/64	270.43	250.92	.57	—	—	2.22	1.49	1.54	1.41	1.36	.72	—	9.50	3.77	28.96
1964/65	285.29	299.10	—	.57	.61	2.22	1.39	1.19	1.48	1.48	.83	—	9.50	3.51	28.33
R1965/66	353.87	343.89	—	.67	.70	2.59	1.66	1.39	1.13	1.24	1.04	—	10.85	4.21	40.30
1966/67	490.98	444.98	—	.76	.83	3.19	1.73	1.51	1.33	1.84	1.03	—	10.83	4.76	41.12
1967/68	519.22	481.98	—	.72	.87	3.09	1.75	1.32	1.57	1.69	1.09	—	12.12	4.91	44.32
1968/69	507.06	525.61	—	.67	.78	3.26	1.71	1.46	1.39	1.61	1.26	—	13.16	4.71	45.24

STATEMENT VIII (cont'd)
Comparison of Unit Prices on Contracts for Use in Tender Price Index
For Period April 1, 1950 to March 31, 1969

Fiscal year	Placing concrete		Placing C.S.P. 18"		Concrete base		Concrete pavement		Bituminous hot mix top course		Bituminous hot mix base course		Structural steel fabrication		Structural steel erection		Structural steel supply and erection		Structural steel delivery		Concrete in structures		Concrete in foundations		Concrete in structures	
	lin. ft.	sq. yd.	lin. ft.	sq. yd.	lin. ft.	sq. yd.	lin. ft.	sq. yd.	ton	\$	ton	\$	ton	\$	ton	\$	ton	\$	ton	\$	cu. yd.	\$	cu. yd.	\$	cu. yd.	\$
1950/51	—	—	—	—	—	—	—	—	3.19	3.06	223.41	75.09	—	—	—	—	—	—	—	—	29.63	—	—	—	—	—
1951/52	—	—	—	—	—	—	—	—	4.17	3.99	239.72	76.84	—	—	—	—	—	—	—	—	32.29	—	—	—	—	—
1952/53	—	—	—	—	—	—	—	—	3.92	4.00	256.02	78.58	—	—	—	—	—	—	—	—	33.49	—	—	—	—	—
1953/54	—	—	—	—	—	—	—	—	3.08	3.03	216.76	60.27	—	—	—	—	—	—	—	—	32.88	—	—	—	—	—
1954/55	—	—	—	—	—	—	—	—	2.68	2.75	194.46	40.04	—	—	—	—	—	—	—	—	27.36	—	—	—	—	—
1955/56	—	—	—	—	—	—	—	—	4.03	3.12	281.23	96.28	—	—	—	—	—	—	—	—	36.64	—	—	—	—	—
1956/57	—	—	—	—	—	—	—	—	4.51	3.59	354.80	119.12	—	—	—	—	—	—	—	—	39.85	—	—	—	—	—
1957/58	—	—	—	—	—	—	—	—	4.17	3.28	277.96	87.27	—	—	—	—	—	—	—	—	38.11	—	—	—	—	—
1958/59	—	—	—	—	—	—	—	—	3.93	2.89	237.93	59.50	—	—	—	—	—	—	—	—	31.98	—	—	—	—	—
1959/60	—	—	—	—	—	—	—	—	4.31	3.21	246.28	63.69	—	—	—	—	—	—	—	—	37.77	—	—	—	—	—
1960/61	—	—	—	—	—	—	—	—	3.93	3.37	277.75	75.32	—	—	—	—	—	—	—	—	32.66	—	—	—	—	—
1961/62	—	—	—	—	—	—	—	—	3.60	2.62	233.71	39.78	—	—	—	—	—	—	—	—	29.50	—	—	—	—	—
1962/63	—	—	—	—	—	—	—	—	4.40	3.52	267.18	58.48	—	—	—	—	—	—	—	—	31.34	—	—	—	—	—
1963/64	—	—	—	—	—	—	—	—	4.99	4.30	259.06	50.86	—	—	—	—	—	—	—	—	31.85	—	—	—	—	—
1964/65	.98	2.97	.67	2.69	.83	3.26	.83	3.38	4.51	4.37	—	—	322.64	9.03	—	—	—	—	—	—	—	26.53	—	—	52.41	—
1965/66	1.69	3.38	.83	3.26	.99	3.33	.99	3.83	4.88	5.02	—	—	405.63	4.48	—	—	—	—	—	—	—	33.35	—	—	61.32	—
1966/67	1.74	3.83	.99	3.33	1.21	4.17	1.21	4.39	5.69	5.48	—	—	498.53	10.12	—	—	—	—	—	—	—	35.03	—	—	67.55	—
1967/68	1.85	4.39	1.43	4.17	1.43	4.50	1.43	4.51	5.56	5.33	—	—	426.44	14.18	—	—	—	—	—	—	—	33.67	—	—	73.05	—
1968/69	1.85	4.51	1.43	4.50	1.43	4.51	1.43	4.51	5.49	5.06	—	—	459.43	14.31	—	—	—	—	—	—	—	36.54	—	—	75.32	—

R : Major revision—prices published are adjusted to maintain comparability.

Memorandum

Memorandum

Appendices

APPENDIX No. 1

Department Expenditures on King's Highways, Secondary Highways,
Tertiary Roads, Access and Industrial Roads, Connecting Links,
Development Roads, Roads in Unincorporated Townships, by County and
Territorial District

April 1, 1968 to March 31, 1969

County	Construction	Maintenance	Total
Brant			
Highway 2	\$ 795,568	\$ 102,526	\$ 898,094
" 5	—	54,699	54,699
" 24	36,834	48,902	85,736
" 24A	69,081	58,367	127,448
" 53	226,977	54,625	281,602
" 54	—	71,389	71,389
" 99	4,873	16,986	21,859
" 403	11,550	48,692	60,242
Connecting Links:			
City of Brantford	152,807	—	152,807
Town of Paris	14,280	540	14,820
Development Roads	1,116,537	—	1,116,537
Lands and Buildings	—	137	137
Other program:			
Brantford Expressway	59,883	—	59,883
	<u>\$ 2,488,390</u>	<u>\$ 456,863</u>	<u>\$ 2,945,253</u>

County	Construction	Maintenance	Total
Bruce			
Highway 4	\$ 165,268	\$ 81,139	\$ 246,407
" 6	899,305	151,635	1,050,940
" 9	47,895	95,888	143,783
" 21	177,857	193,010	370,867
" 86	66	29,062	29,128
Connecting Links:			
Town of Kincardine	358	2,562	2,920
Town of Port Elgin	—	1,053	1,053
Town of Southampton	—	1,728	1,728
Town of Walkerton	—	3,547	3,547
Town of Wiarton	—	1,010	1,010
Village of Lucknow	1,423	1,744	3,167
Village of Mildmay	56,004	31	56,035
Village of Teeswater	—	360	360
Development Roads	71,149	—	71,149
Lands and Buildings	1,984	1,494	3,478
	<u>\$ 1,421,309</u>	<u>\$ 564,263</u>	<u>\$ 1,985,572</u>

County	Construction	Maintenance	Total
Dufferin			
Highway 9	\$ 936	\$ 85,179	\$ 86,115
" 10	21,443	88,887	110,330
" 24	5,652	64,830	70,482
" 89	5,841	51,172	57,013
" 104	213	6,652	6,865
" 136	14	2,586	2,600
Connecting Links:			
Town of Orangeville	—	1,751	1,751
Village of Shelburne	283	1,136	1,419
Development Roads	412,262	—	412,262
Lands and Buildings	220	5,542	5,762
Sidewalks	639	—	639
	\$ 447,503	\$ 307,735	\$ 755,238

County	Construction	Maintenance	Total
Elgin			
Highway 3	\$ 18,747	\$ 259,271	\$ 278,018
" 4	370,372	77,163	447,535
" 19	8,614	53,670	62,284
" 73	4,429	46,873	51,302
" 74	866	28,589	29,455
" 76	1,142	24,774	25,916
" 401 (M.-C.F.)	506,707	159,762	666,469
Connecting Links:			
Town of Aylmer	62,383	3,450	65,833
Village of Belmont	—	767	767
Village of Port Burwell	64,651	440	65,091
Development Roads	1,030,808	—	1,030,808
Lands and Buildings	41,492	13,784	55,276
	\$ 2,110,211	\$ 668,543	\$ 2,778,754

County	Construction	Maintenance	Total
Essex			
Highway 2	\$ 5,831	\$ 93,696	\$ 99,527
" 3	190,783	104,030	294,813
" 18	53,842	98,147	151,989
" 18A	2,723	70,919	73,642
" 39	5,407	27,139	32,546
" 77	2,684	33,585	36,269
" 98	68,888	113,859	182,747
" 107	—	2,085	2,085
" 114	43	3,485	3,528
" 401 (M.-C.F.)	1,406,357	135,289	1,541,646
Other Program:			
E.C. Row Expressway (Windsor)	569,396	—	569,396
Connecting Links:			
Town of Amherstburg	—	469	469
Town of Belle River	—	760	760
Town of Essex	—	2,220	2,220
Town of Harrow	—	327	327
Town of Kingsville	—	876	876
Town of Leamington	—	808	808
Lands and Buildings	26,932	2,369	29,301
Miscellaneous Surveys	4,029	—	4,029
	\$ 2,336,915	\$ 690,063	\$ 3,026,978

County	Construction	Maintenance	Total
Frontenac			
Highway 2	\$ 1,131,058	\$ 75,516	\$ 1,206,574
" 7	2,755	86,230	88,985
" 15	2,753	71,936	74,689
" 33	1,332	17,115	18,447
" 38	1,248,965	114,259	1,363,224
" 41	140,466	23,377	163,843
" 95	1,055	30,705	31,760
" 96	6,571	64,297	70,868
" 401 (M.-C.F.)	110,057	165,480	275,537
Sec. Hwy. 506	36,018	57,584	93,602
" " 509	7,862	35,993	43,855
Connecting Link:			
City of Kingston	155,578	17,811	173,389
Development Roads	917,340	20,214	937,554
Lands and Buildings	18,954	23,487	42,441
Ferries	34,666	463,956	498,622
	<u>\$ 3,815,430</u>	<u>\$ 1,267,960</u>	<u>\$ 5,083,390</u>

County	Construction	Maintenance	Total
Grey			
Highway 4	\$ 44,998	\$ 93,380	\$ 138,378
" 6	8,893	214,503	223,396
" 10	137,058	105,430	242,488
" 24	1,333	12,498	13,831
" 26	34,734	125,979	160,713
" 70	1,922	27,162	29,084
" 89	8,336	29,319	37,655
Connecting Links:			
City of Owen Sound	316,526	—	316,526
Town of Durham	246	3,911	4,157
Town of Hanover	—	852	852
Town of Meaford	146,006	1,348	147,354
Town of Thornbury	14,757	381	15,138
Village of Chatsworth	—	874	874
Village of Flesherton	—	716	716
Village of Markdale	—	1,320	1,320
Development Roads	1,073,302	—	1,073,302
Lands and Buildings	61,287	1,215	62,502
	<u>\$ 1,849,398</u>	<u>\$ 618,888</u>	<u>\$ 2,468,286</u>

County	Construction	Maintenance	Total
Haldimand			
Highway 3	\$ 461,123	\$ 180,257	\$ 641,380
" 6	266,044	88,378	354,422
" 54	681	50,467	51,148
" 56	343	31,440	31,783
Connecting Links:			
Town of Caledonia	83,210	2,956	86,166
Town of Dunnville	1,354	1,718	3,072
Village of Cayuga	—	873	873
Village of Hagersville	—	1,281	1,281
Development Roads	298,557	—	298,557
Lands and Buildings	54,640	—	54,640
Miscellaneous Surveys	855	—	855
	<u>\$ 1,166,807</u>	<u>\$ 357,370</u>	<u>\$ 1,524,177</u>

County	Construction	Maintenance	Total
Halton			
Highway 2	\$ 119,878	\$ 126,867	\$ 246,745
" 5	3,778	76,840	80,618
" 6	3,214	3,266	6,480
" 7	18,324	56,335	74,659
" 25	11,674	97,753	109,427
" 122	65,425	27,347	92,772
" 401 (M.-C.F.)	2,202	177,327	179,529
" 403	33,291	86,248	119,539
Queen Elizabeth Way	362,187	306,895	669,082
Connecting Links:			
Town of Acton	—	2,865	2,865
Town of Burlington	7,486	—	7,486
Town of Georgetown	15,602	3,886	19,488
Town of Milton	2,093	2,257	4,350
Town of Oakville	644,652	18,195	662,847
Lands and Buildings	5,181	11,084	16,265
	<u>\$ 1,294,987</u>	<u>\$ 997,165</u>	<u>\$ 2,292,152</u>

County	Construction	Maintenance	Total
Hastings			
Highway 2	\$ 415,705	\$ 89,146	\$ 504,851
" 7	60,277	87,194	147,471
" 14	76,748	78,001	154,749
" 28	163	24,764	24,927
" 33	4,000	32,184	36,184
" 37	180,011	81,243	261,254
" 49	Cr. 114	4,375	4,261
" 62	1,839,200	274,075	2,113,275
" 121	—	4,439	4,439
" 127	253,330	30,798	284,128
" 401 (M.-C.F.)	386,277	174,151	560,428
Sec. Hwy. 500	328,312	64,003	392,315
" " 502	62	7,299	7,361
" " 504	—	530	530
" " 517	—	13,603	13,603
" " 620	34,141	53,000	87,141
Connecting Links:			
City of Belleville	162,763	—	162,763
Town of Deseronto	—	6,483	6,483
Town of Trenton	Cr. 169,014	—	Cr. 169,014
Village of Bancroft	88,402	4,577	92,979
Village of Frankford	—	250	250
Village of Madoc	194,043	792	194,835
Village of Marmora	—	1,134	1,134
Village of Stirling	—	646	646
Village of Tweed	—	1,478	1,478
Development Roads	1,233,467	12,490	1,245,957
Lands and Buildings	58,832	11,210	70,042
	<u>\$ 5,146,605</u>	<u>\$ 1,057,865</u>	<u>\$ 6,204,470</u>

County	Construction	Maintenance	Total
Huron			
Highway 4	\$ 63,458	\$ 163,038	\$ 226,496
" 8	19,129	111,622	130,751
" 9	—	4,007	4,007
" 21	12,009	151,922	163,931
" 23	2,509	22,313	24,822
" 81	8,037	14,210	22,247
" 83	8,731	54,000	62,731
" 84	1,621	29,960	31,581
" 86	171,111	87,347	258,458
" 87	2,970	45,233	48,203
Connecting Links:			
Town of Clinton	7,933	2,370	10,303
Town of Exeter	134,180	1,698	135,878
Town of Goderich	19,955	25,670	45,625
Town of Seaforth	—	467	467
Town of Wingham	282	1,830	2,112
Development Roads	423,617	—	423,617
Lands and Buildings	12,643	2,961	15,604
	<u>\$ 888,185</u>	<u>\$ 718,648</u>	<u>\$ 1,606,833</u>

County	Construction	Maintenance	Total
Kent			
Highway 2	\$ 4,421	\$ 82,014	\$ 86,435
" 3	579,411	102,787	682,198
" 21	14,001	60,282	74,283
" 40	123,246	53,705	176,951
" 78	1,061	17,451	18,512
" 79	853	11,845	12,698
" 98	2,866	52,720	55,586
" 401 (M.-C.F.)	211,096	190,587	401,683
Connecting Links:			
City of Chatham	41,943	—	41,943
Town of Blenheim	Cr. 263	821	558
Town of Bothwell	—	537	537
Town of Dresden	—	4,088	4,088
Town of Ridgetown	—	1,081	1,081
Town of Tilbury	—	203	203
Town of Wallaceburg	103,392	6,067	109,459
Village of Thamesville	—	442	442
Village of Wheatley	—	213	213
Lands and Buildings	93,782	3,598	97,380
Miscellaneous Surveys	1,703	—	1,703
Weigh Scales	1,238	—	1,238
	<u>\$ 1,178,750</u>	<u>\$ 588,441</u>	<u>\$ 1,767,191</u>

County	Construction	Maintenance	Total
Lambton			
Highway 7	\$ 9,799	\$ 120,354	\$ 130,153
" 21	278,337	133,218	411,555
" 22	343	5,330	5,673
" 40	130,406	62,725	193,131
" 79	8,064	64,091	72,155
" 80	3,229	83,148	86,377
" 82	879	14,294	15,173
" 402	521,703	28,141	549,844
Connecting Links:			
City of Sarnia	458,759	29,677	488,436
Town of Forest	—	526	526
Village of Grand Bend	5,151	1,877	7,028
Village of Thedford	—	1,128	1,128
Village of Watford	—	683	633
Village of Wyoming	—	517	517
Development Roads	1,109,519	—	1,109,519
Lands and Buildings	3,686	1,636	5,322
	<u>\$ 2,529,875</u>	<u>\$ 547,345</u>	<u>\$ 3,077,220</u>

County	Construction	Maintenance	Total
Lanark			
Highway 7	\$ 448,408	\$ 154,419	\$ 602,827
" 15	535	57,801	58,336
" 29	12,748	45,751	58,499
" 43	Cr. 1,393	68,033	66,640
" 44	1,582	4,557	6,139
Sec. Hwy. 511	8,838	42,633	51,471
Connecting Links:			
Town of Almonte	23,981	1,718	25,699
Town of Carleton Place	—	399	399
Town of Smiths Falls	173,751	—	173,751
Development Roads	817,676	25,000	842,676
Lands and Buildings	11,082	4,506	15,588
Weigh Scales	—	1,114	1,114
	<u>\$ 1,497,208</u>	<u>\$ 405,931</u>	<u>\$ 1,903,139</u>

County	Construction	Maintenance	Total
Leeds and Grenville			
Highway 2	\$ 12,333	\$ 171,637	\$ 183,970
" 2S	14,939	116,262	131,201
" 15	53,210	118,462	171,672
" 16	41,712	70,248	111,960
" 29	3,098	72,312	75,410
" 32	6,320	46,236	52,556
" 42	492,676	87,802	580,478
" 43	884	54,294	55,178
" 137	—	13,724	13,724
" 401 (M.-C.F.)	3,958,613	346,853	4,305,466
" 416	215,844	—	215,844
Connecting Links:			
City of Brockville	178	—	178
Town of Kemptville	—	323	323
Town of Prescott	8,764	—	8,764
Village of Athens	—	456	456
Village of Merrickville	—	3,571	3,571
Village of Westport	Cr. 286	481	195
Development Roads	556,670	—	556,670
Lands and Buildings	36,220	5,390	41,610
Sidewalks	396	—	396
	<u>\$ 5,401,571</u>	<u>\$ 1,108,051</u>	<u>\$ 6,509,622</u>

County	Construction	Maintenance	Total
Lennox and Addington			
Highway 2	\$ 1,872	\$ 75,556	\$ 77,428
" 7	1,219	28,705	29,924
" 33	20,193	88,055	108,248
" 41	732,767	163,685	896,452
" 133	576	18,861	19,437
" 401 (M.-C.F.)	4,736	165,499	170,235
Sec. Hwy. 500	140	14,768	14,908
" 502	35,808	18,083	53,891
Connecting Links:			
Town of Napanee	8,274	—	8,274
Village of Bath	—	248	248
Development Roads	925,437	—	925,437
Lands and Buildings	22,234	36,138	58,372
Ferries	2,006	143,120	145,126
	<u>\$ 1,755,262</u>	<u>\$ 752,718</u>	<u>\$ 2,507,980</u>

County	Construction	Maintenance	Total
Lincoln			
Highway 8	\$ 109,866	\$ 152,232	\$ 262,098
" 8A	25,745	15,151	40,896
" 20	12,905	121,253	134,158
" 57	700	11,388	12,088
" 405	15,793	42,996	58,789
" 406	78,842	15,779	94,621
Queen Elizabeth Way	1,680,120	738,314	2,418,434
Connecting Links:			
City of St. Catharines	79,698	—	79,698
Town of Beamsville	—	755	755
Town of Grimsby	—	3,204	3,204
Development Roads	403,518	—	403,518
Lands and Buildings	2,000	7,882	9,882
Miscellaneous Surveys	1,411	—	1,411
	<u>\$ 2,410,598</u>	<u>\$ 1,108,954</u>	<u>\$ 3,519,552</u>

County	Construction	Maintenance	Total
Middlesex			
Highway 2	\$ 17,697	\$ 144,055	\$ 161,752
" 4	137,859	87,984	225,843
" 7	1,254,399	119,421	1,373,820
" 22	926	65,737	66,663
" 23	799	18,086	18,885
" 73	900	14,924	15,824
" 74	29,901	16,232	46,133
" 76	—	3,412	3,412
" 80	272	24,121	24,393
" 81	304,117	91,186	395,303
" 126	2,826	23,078	25,904
" 135	3,924	11,022	14,946
" 401 (M.-C.F.)	260,891	194,634	455,525
" 402	15,070	—	15,070
Connecting Links:			
City of London	475,488	—	475,488
Town of Parkhill	—	694	694
Town of Strathroy	792	1,423	2,215
Village of Glencoe	473,586	41	473,627
Village of Lucan	—	1,685	1,685
Development Roads	3,274	—	3,274
Lands and Buildings	4,618	3,944	8,562
Weigh Scales	—	1,953	1,953
Sidewalks	286	—	286
	\$ 2,987,625	\$ 823,632	\$ 3,811,257

County	Construction	Maintenance	Total
Norfolk			
Highway 3	\$ 80,371	\$ 92,422	\$ 172,793
" 6	279,883	18,663	298,546
" 19	10,092	7,575	17,667
" 24	446,531	84,733	531,264
" 59	112,110	65,437	177,547
Connecting Links:			
Town of Delhi	4,759	700	5,459
Town of Port Dover	4,504	303	4,807
Town of Simcoe	5,139	702	5,841
Development Roads	492,050	—	492,050
Lands and Buildings	14,474	5,718	20,192
	\$ 1,449,913	\$ 276,253	\$ 1,726,166

County	Construction	Maintenance	Total
Northumberland and Durham			
Highway 2	\$ 851,031	\$ 317,211	\$ 1,168,242
" 7	634	5,962	6,596
" 7A	575,856	86,914	662,770
" 28	16,678	106,468	123,146
" 30	602,322	367,623	969,945
" 33	20,796	21,337	42,133
" 35	1,805	106,755	108,560
" 45	157,492	106,448	263,940
" 106	—	10,057	10,057
" 115	2,597	71,485	74,082
" 401 (M.-C.F.)	51,406	638,142	689,548
" 407	5,147	—	5,147
Connecting Links:			
Town of Bowmanville	32,152	732	32,884
Town of Campbellford	—	353	353
Town of Cobourg	223,346	307	223,653
Town of Port Hope	19,155	4,758	23,913
Village of Brighton	—	2,760	2,760
Village of Colborne	4,594	901	5,495
Village of Hastings	—	515	515
Village of Newcastle	—	278	278
Development Roads.	250,608	—	250,608
Lands and Buildings	66,519	100	66,619
Sidewalks	1,904	—	1,904
	<u>\$ 2,884,042</u>	<u>\$ 1,849,106</u>	<u>\$ 4,733,148</u>

County	Construction	Maintenance	Total
Ontario			
Highway 2	\$ 345,721	\$ 88,710	\$ 434,431
" 7	183,141	250,164	433,305
" 7A	7,958	33,568	41,526
" 12	8,879	230,774	239,653
" 47	11,786	125,615	137,401
" 48	4,344	101,949	106,293
" 69	727	89,714	90,441
" 401 (M.-C.F.)	29,819	273,931	303,750
" 407	7,705	—	7,705
Sec. Hwy. 503	85	3,403	3,488
Connecting Links:			
City of Oshawa	249,877	—	249,877
Town of Uxbridge	142,389	2,694	145,083
Town of Whitby	50,880	18,236	69,116
Village of Beaverton	14,185	2,249	16,434
Development Roads	691,368	—	691,368
Lands and Buildings	25,276	2,714	27,990
Sidewalks	2,384	—	2,384
	<u>\$ 1,776,524</u>	<u>\$ 1,223,721</u>	<u>\$ 3,000,245</u>

County	Construction	Maintenance	Total
Ottawa—Carleton			
Highway 7	\$ 208,997	\$ 76,320	\$ 285,317
" 16	383,877	83,325	467,202
" 17	1,052,707	231,350	1,284,057
" 29	—	8,723	8,723
" 31	19,025	99,991	119,016
" 44	434	14,285	14,719
" 416	8,225	—	8,225
" 417	3,416,462	—	3,416,462
Other Program:			
Ottawa Queensway	74,358	212,275	286,633
Connecting Link:			
City of Ottawa	810,286	1,581	811,867
Development Roads	413,326	—	413,326
Lands and Buildings	66,982	5,443	72,425
Sidewalks	3,569	—	3,569
	<u>\$ 6,458,248</u>	<u>\$ 733,293</u>	<u>\$ 7,191,541</u>

County	Construction	Maintenance	Total
Oxford			
Highway 2	\$ 3,108	\$ 114,224	\$ 117,332
" 3	19,452	7,890	27,342
" 7	170,978	2,516	173,494
" 19	10,125	92,235	102,360
" 53	205	15,715	15,920
" 59	30,421	117,108	147,529
" 97	2,252	55,614	57,866
" 401 (M.-C.F.)	37,231	232,851	270,082
" 403	23	—	23
Connecting Links:			
City of Woodstock	Cr. 4,146	—	Cr. 4,146
Town of Ingersoll	82,945	—	82,945
Town of Tillsonburg	—	108	108
Village of Norwich	—	1,634	1,634
Village of Tavistock	—	939	939
Development Roads	11,143	—	11,143
Lands and Buildings	2,694	3,879	6,573
	<u>\$ 366,431</u>	<u>\$ 644,713</u>	<u>\$ 1,011,144</u>

County	Construction	Maintenance	Total
Peel			
Highway 2	\$ 252,601	\$ 80,648	\$ 333,249
" 5	132,955	111,099	244,054
" 7	105,352	79,550	184,902
" 9	1,442	64,487	65,929
" 10	1,809,528	589,543	2,399,071
" 24	5,889	28,369	34,258
" 27	17	—	17
" 50	19,133	96,417	115,550
" 122	214,061	25,284	239,345
" 136	1,151	36,136	37,287
" 401	528,561	144,429	672,990
" 403	5,110	—	5,110
Queen Elizabeth Way	1,531,611	146,324	1,677,935
Other Program:			
Belfield Expressway	1,150	—	1,150
Connecting Links:			
Town of Brampton	332,711	11,101	343,812
Town of Port Credit	31,412	5,078	36,490
Village of Bolton	—	1,944	1,944
Development Roads	32,451	—	32,451
Lands and Buildings	121,238	4,013	125,251
Miscellaneous Surveys	2,594	—	2,594
Sidewalks	31,831	—	31,831
	<u>\$ 5,160,798</u>	<u>\$ 1,424,422</u>	<u>\$ 6,585,220</u>

County	Construction	Maintenance	Total
Perth			
Highway 7	\$ 1,099,443	\$ 97,287	\$ 1,196,730
" 8	7,657	75,910	83,567
" 19	7,397	80,442	87,839
" 23	929,986	152,363	1,082,349
" 59	45	12,952	12,997
" 83	—	9,552	9,552
" 86	26,446	40,703	67,149
Connecting Links:			
City of Stratford	51,338	82	51,420
Town of Listowel	31,049	4,554	35,603
Town of Mitchell	67,711	2,677	70,388
Town of St. Marys	69,721	8	69,729
Village of Milverton	—	633	633
Lands and Buildings	41,365	4,828	46,193
Sidewalks	1,034	—	1,034
	<u>\$ 2,333,192</u>	<u>\$ 481,991</u>	<u>\$ 2,815,183</u>

APPENDICES

County	Construction	Maintenance	Total
Peterborough			
Highway 7	\$ 863,822	\$ 169,638	\$ 1,033,460
" 28	191,783	163,897	355,680
" 30	123,580	72,465	196,045
" 36	1,049	44,310	45,359
" 45	138,047	16,770	154,817
" 115	493	2,735	3,228
" 121	435	3,588	4,023
Sec. Hwy. 503	—	4,957	4,957
" " 504	—	42,463	42,463
" " 507	346,361	95,806	442,167
" " 620	18,494	57,411	75,905
" " 620A	—	723	723
" " 649	125	6,269	6,394
Connecting Links:			
City of Peterborough	73,453	—	73,453
Village of Havelock	—	479	479
Village of Lakefield	—	649	649
Village of Norwood	—	295	295
Development Roads	1,631,297	—	1,631,297
Lands and Buildings	5,763	2,216	7,979
Sidewalks	48	—	48
	<u>\$ 3,394,750</u>	<u>\$ 684,671</u>	<u>\$ 4,079,421</u>

County	Construction	Maintenance	Total
Prescott and Russell			
Highway 17	\$ 72,511	\$ 276,407	\$ 348,918
" 34	1,518	28,415	29,933
" 417	10,076	—	10,076
Other program:			
Perley Bridge (Hawkesbury)	—	5,035	5,035
Connecting links:			
Town of Hawkesbury	Cr. 474	—	Cr. 474
Town of Rockland	—	5,903	5,903
Town of Vankleek Hill	344	238	582
Development Roads	1,217,849	—	1,217,849
Lands and Buildings	11,881	1,917	13,798
Miscellaneous Surveys	74	—	74
Weigh Scales	—	2,127	2,127
Sidewalks	2,263	—	2,263
	<u>\$ 1,316,042</u>	<u>\$ 320,042</u>	<u>\$ 1,636,084</u>

County	Construction	Maintenance	Total
Prince Edward			
Highway 14	\$ 927	\$ 66,780	\$ 67,707
" 33	29,657	106,017	135,674
" 49	165,061	39,999	205,060
Connecting links:			
Town of Picton	94,430	—	94,430
Village of Bloomfield	—	1,393	1,393
Village of Wellington	—	903	903
Development Roads	1,188,286	—	1,188,286
Lands and Buildings	—	423	423
Ferries	—	142,523	142,523
	<u>\$ 1,478,361</u>	<u>\$ 358,038</u>	<u>\$ 1,836,399</u>

County	Construction	Maintenance	Total
Renfrew			
Highway 17	\$ 1,567,911	\$ 495,010	\$ 2,062,921
" 29	—	2,572	2,572
" 41	34,770	150,306	185,076
" 60	46,187	139,670	185,857
" 62	163,595	146,261	309,856
" 132	803	49,033	49,836
Sec. Hwy. 500	670	31,427	32,097
" " 508	13,943	158,211	172,154
" " 511	455	24,488	24,943
" " 512	11,365	84,183	95,548
" " 513	—	34,047	34,047
" " 515	469,804	75,101	544,905
" " 517	—	12,595	12,595
" " 635	—	4,796	4,796
" " 653	80,326	17,132	97,458
Connecting links:			
Town of Arnprior	34,846	—	34,846
Town of Pembroke	64,538	13,360	77,898
Town of Renfrew	16,607	—	16,607
Village of Barry's Bay	—	1,215	1,215
Village of Eganville	—	712	712
Development Roads	1,119,256	2,498	1,121,754
Lands and Buildings	72,758	9,314	82,072
Weigh Scales	—	3,296	3,296
Sidewalks	494	—	494
	<u>\$ 3,698,328</u>	<u>\$ 1,455,227</u>	<u>\$ 5,153,555</u>

County	Construction	Maintenance	Total
Simcoe			
Highway 9	\$ 50,538	\$ 38,592	\$ 89,130
" 11	93,778	402,423	496,201
" 12	37,168	154,756	191,924
" 24	9,006	50,861	59,867
" 26	728,039	146,332	874,371
" 27	405,980	241,291	647,271
" 69	3,555	2,157	5,712
" 88	284	41,853	42,137
" 89	49,661	70,925	120,586
" 90	13,087	51,058	64,145
" 91	3,585	16,729	20,314
" 92	149	35,760	35,909
" 93	641	76,400	77,041
" 103	—	19,871	19,871
" 400	135,245	578,507	713,752
Connecting Links:			
City of Barrie	168,956	903	169,859
City of Orillia	100	13,801	13,901
Town of Alliston	2,152	4,141	6,293
Town of Bradford	—	10,964	10,964
Town of Collingwood	112,834	7,533	120,367
Town of Midland	187,761	3,175	190,936
Town of Penetanguishene	—	4,085	4,085
Town of Stayner	877	662	1,539
Village of Coldwater	—	1,722	1,722
Village of Cookstown	—	3,669	3,669
Village of Elmvale	21,264	2,889	24,153
Village of Port McNicoll	—	1,269	1,269
Village of Victoria Harbour	—	3,497	3,497
Village of Wasaga Beach	—	985	985
Development Roads	106,639	—	106,639
Lands and Buildings	43,590	5,606	49,196
	<u>\$ 2,174,889</u>	<u>\$ 1,992,416</u>	<u>\$ 4,167,305</u>

County	Construction	Maintenance	Total
Stormont, Dundas and Glengarry			
Highway 2	\$ 254,379	\$ 130,308	\$ 384,687
" 31	56,903	80,721	137,624
" 34	8,031	86,277	94,308
" 43	724,258	175,627	899,885
" 138	265,098	27,156	292,254
" 401 (M.-C.F.)	394,977	360,896	755,873
" 417	3,487	—	3,487
Connecting Links:			
City of Cornwall	40,437	—	40,437
Town of Alexandria	—	1,418	1,418
Village of Chesterville	—	76	76
Village of Winchester	—	1,111	1,111
Development Roads	880,238	25,764	906,002
Lands and Buildings	111,637	8,911	120,548
Miscellaneous Surveys	37	—	37
Weigh Scales	—	1,352	1,352
Sidewalks	1,541	—	1,541
	<u>\$ 2,741,023</u>	<u>\$ 899,617</u>	<u>\$ 3,640,640</u>

County	Construction	Maintenance	Total
Victoria			
Highway 7	\$ 9,924	\$ 137,263	\$ 147,187
" 35	29,800	138,800	168,600
" 35A	—	5,118	5,118
" 36	5,088	60,461	65,549
" 46	3,325	72,950	76,275
" 48	715	13,038	13,753
" 121	11,691	60,374	72,065
Sec. Hwy. 503	101,429	110,251	211,680
" " 505	Cr. 140	32,207	32,067
" " 649	664	19,846	20,510
Connecting Links:			
Town of Lindsay	75,019	7,022	82,041
Village of Bobcaygeon	1,968	2,174	4,142
Village of Fenelon Falls	—	1,160	1,160
Village of Omemee	—	762	762
Village of Woodville	58,481	837	59,318
Development Roads	1,366,959	—	1,366,959
Lands and Buildings	6,351	65	6,416
	<u>\$ 1,671,274</u>	<u>\$ 662,328</u>	<u>\$ 2,333,602</u>

County	Construction	Maintenance	Total
Waterloo			
Highway 7	\$ 259,263	\$ 111,232	\$ 370,495
" 8	7,768,278	57,645	7,825,923
" 24	4,490	24,070	28,560
" 24A	35,729	14,053	49,782
" 85	299	25,827	26,126
" 86	6,129	54,574	60,703
" 97	971	51,040	52,011
" 401 (M.-C.F.)	1,164	113,875	115,039
Connecting Links:			
City of Galt	300,792	16,683	317,475
City of Kitchener	—	322	322
City of Waterloo	—	20	20
Town of Elmira	—	1,780	1,780
Town of Hespeler	—	494	494
Town of New Hamburg	—	770	770
Town of Preston	4,784	9,296	14,080
Lands and Buildings	60	2,644	2,704
Miscellaneous Surveys	1,560	—	1,560
	<u>\$ 8,383,519</u>	<u>\$ 484,325</u>	<u>\$ 8,867,844</u>

County	Construction	Maintenance	Total
Welland			
Highway 3	\$ 664,704	\$ 156,522	\$ 821,226
" 3A.	5,165	35,571	40,736
" 3C.	1,412	27,966	29,378
" 8	1,971	Cr. 1,690	281
" 20	23,139	69,700	92,839
" 57	1,548	22,741	24,289
" 58	642,766	92,686	735,452
" 140	123	—	123
" 405	249,145	10,354	259,499
" 406	3,125,360	—	3,125,360
Queen Elizabeth Way	245,692	266,378	512,070
Other programs:			
Main St. East Tunnel (Welland)	359,154	—	359,154
Thorold Tunnel	2,460,242	—	2,460,242
Rainbow Bridge Plaza	28,003	—	28,003
Niagara Freeway	97,307	—	97,307
Connectings Links:			
City of Niagara Falls	45,067	—	45,067
City of Port Colborne	128,698	818	129,516
City of Welland	33,866	—	33,866
Town of Fort Erie	—	1,510	1,510
Development Roads.	126,421	—	126,421
Lands and Buildings	5,025	—	5,025
Miscellaneous Surveys.	25,098	—	25,098
	<u>\$ 8,269,906</u>	<u>\$ 682,556</u>	<u>\$ 8,952,462</u>

County	Construction	Maintenance	Total
Wellington			
Highway 6	\$ 202,210	\$ 166,363	\$ 368,573
" 7	12,132	52,061	64,193
" 9	14,245	105,224	119,469
" 23	—	6,979	6,979
" 24	32,221	86,775	118,996
" 25	12,903	18,290	31,193
" 86	30,610	48,151	78,761
" 87	95	14,966	15,061
" 89	121,899	57,795	179,694
" 401 (M.-C.F.)	2,960	132,285	135,245
Connecting Links:			
City of Guelph	108,102	815	108,917
Town of Fergus	174,973	1,364	176,337
Town of Harriston	—	2,303	2,303
Town of Mount Forest	118,118	3,235	121,353
Town of Palmerston	319	616	935
Village of Arthur	—	783	783
Village of Clifford	—	797	797
Village of Erin	1,526	1,183	2,709
Development Roads	1,455,594	—	1,455,594
Lands and Buildings	3,419	7,128	10,547
Miscellaneous Surveys	37	—	37
Sidewalks	1,093	—	1,093
	<u>\$ 2,292,456</u>	<u>\$ 707,113</u>	<u>\$ 2,999,569</u>

County	Construction	Maintenance	Total
Wentworth			
Highway 2	\$ 1,115,352	\$ 70,885	\$ 1,186,237
" 5	2,171	106,090	108,261
" 6	217,230	104,238	321,468
" 8	431,156	106,510	537,666
" 20	1,308	51,754	53,062
" 52	2,901	73,859	76,760
" 53	234	39,438	39,672
" 56	1,361	36,612	37,973
" 97	3,703	34,635	38,338
" 99	35,463	52,179	87,642
" 403	2,897,544	59,703	2,957,247
Queen Elizabeth Way	3,481,429	516,651	3,998,080
Connecting Links:			
City of Hamilton	456,797	—	456,797
Town of Dundas	96,439	3,955	100,394
Town of Stoney Creek	—	628	628
Lands and Buildings	2,687	4,598	7,285
Miscellaneous Surveys	677	—	677
Sidewalks	6,443	—	6,443
	<u>\$ 8,752,895</u>	<u>\$ 1,261,735</u>	<u>\$10,014,630</u>

County	Construction	Maintenance	Total
York			
Highway 2	\$ 357	—	\$ 357
" 2A	46,375	\$ 15,195	61,570
" 5	6,945	4,471	11,416
" 7	277,469	230,961	508,430
" 9	527,880	87,967	615,847
" 11	202,840	211,846	414,686
" 27	17,371,344	784,764	18,156,108
" 47	671	23,951	24,622
" 48	302,361	246,387	548,748
" 50	764	25,010	25,774
" 117	521	7,662	8,183
" 400	2,411,146	331,443	2,742,589
" 401 (M.-C.F.)	12,667,387	1,268,383	13,935,770
" 403	10,726	—	10,726
" 404	48,288	—	48,288
" 407	634,056	—	634,056
" 427	1,402	—	1,402
Queen Elizabeth Way	9,207,422	89,690	9,297,112
Other Programs:			
Belfield Expressway (Toronto)	1,415,993	—	1,415,993
International Airport Road (Toronto)	10,652	17,055	27,707
Connecting Links:			
Town of Aurora	306,991	1,426	308,417
Town of Richmond Hill	—	8,255	8,255
Village of Markham	—	5,490	5,490
Village of Stouffville	—	10,048	10,048
Lands and Buildings	41,680	147,982	189,662
Miscellaneous Surveys	138	—	138
Sidewalks	13,351	—	13,351
	<u>\$45,506,759</u>	<u>\$ 3,517,986</u>	<u>\$49,024,745</u>

District	Construction	Maintenance	Total
Algoma			
Highway 17	\$ 1,943,944	\$ 953,897	\$ 2,897,841
" 101	410,345	72,427	482,772
" 108	395	61,682	62,077
" 129	30,163	318,555	348,718
Sec. Hwy. 538	—	10,957	10,957
" 546	105,342	91,050	196,392
" 547	12,605	5,872	18,477
" 548	110,685	141,316	252,001
" 550	69,072	18,852	87,924
" 552	13,647	31,162	44,809
" 552A	—	2,727	2,727
" 553	—	97,504	97,504
" 554	—	23,576	23,576
" 555	410	18,706	19,116
" 556	1,502	67,199	68,701
" 557	—	33,671	33,671
" 561	62,536	27,986	90,522
" 563	6,924	8,493	15,417
" 565	—	2,907	2,907
" 631	1,605,535	105,538	1,711,073
" 638	22,970	121,172	144,142
" 639	—	46,696	46,696
" 651	807,310	32,045	839,355
Access Roads:			
Panel Mine Rd.	—	11,625	11,625
Denison Mine Rd.	—	4,033	4,033
Stanrock Mine Rd.	—	21,351	21,351
Milliken Mine Rd.	—	7,117	7,117
Algom-Nordic Mine Rd.	—	2,372	2,372
Connecting Links:			
Township of Michipicoten	—	244	244
City of Sault Ste. Marie	67,699	—	67,699
Town of Blind River	—	7,128	7,128
Town of Thessalon	—	1,295	1,295
Unincorporated Township Roads:			
Local Road Board	63,954	64,255	128,209
Statute Labour Board	16,566	20,677	37,243
Special—Settlers	—	346	346
Development Roads:	64,312	—	64,312
Lands and Buildings	35,481	12,316	47,797
Ferries	—	157,074	157,074
	<u>\$ 5,451,397</u>	<u>\$ 2,603,823</u>	<u>\$ 8,055,220</u>

District	Construction	Maintenance	Total
Cochrane			
Highway 11	\$ 650,999	\$ 872,191	\$ 1,523,190
" 67	423,240	54,304	477,544
" 101	177,940	193,312	371,252
" 144	22,708	2,463	25,171
Sec. Hwy. 572	1,665	20,036	21,701
" " 574	102,414	75,673	178,087
" " 575	27	6,868	6,895
" " 576	24,160	23,375	47,535
" " 577	80	48,428	48,508
" " 578	1,381	14,080	15,461
" " 579	—	64,776	64,776
" " 581	15,150	8,690	23,840
" " 583	28,583	130,961	159,544
" " 610	20,006	27,755	47,761
" " 626	4,674	46,193	50,867
" " 629	71,936	15,341	87,277
" " 631	—	13,984	13,984
" " 636	—	14,031	14,031
" " 652	—	47,304	47,304
" " 655	—	30,677	30,677
Tertiary Road 807	7,349	64,801	72,150
Connecting Links:			
Township of Kendrey	—	711	711
Township of Tisdale	3,220	1,406	4,626
Town of Cochrane	—	2,788	2,788
Town of Hearst	—	2,584	2,584
Town of Iroquois Falls	—	1,837	1,837
Town of Kapuskasing	—	205	205
Town of Matheson	—	2,187	2,187
Town of Timmins	254,374	3,360	257,734
Unincorporated Township Roads:			
Local Road Board	18,807	109,873	128,680
Statute Labour Board	1,962	36,967	38,929
Special—Settlers	—	603	603
Indian Reserves	—	926	926
Development Roads	134,400	1,570	135,970
Lands and Buildings	31,064	14,859	45,923
Miscellaneous Surveys	71	—	71
Ferries	—	23,443	23,443
	<u>\$ 1,996,210</u>	<u>\$ 1,978,562</u>	<u>\$ 3,974,772</u>

District	Construction	Maintenance	Total
Haliburton			
Highway 28	\$ 614,417	\$ 19,587	\$ 634,004
" 35	1,092,385	124,918	1,217,303
" 60	—	17,092	17,092
" 121	30,089	151,249	181,338
Sec. Hwy. 503	—	72,027	72,027
" " 507	93,679	14,621	108,300
" " 519	365,475	84,963	450,438
" " 530	19,832	31,496	51,328
" " 648	75	49,679	49,754
Development Roads	119,922	—	119,922
Lands and Buildings	43,599	1,581	45,180
	<u>\$ 2,379,473</u>	<u>\$ 567,213</u>	<u>\$ 2,946,686</u>

District	Construction	Maintenance	Total
Kenora			
Highway 17	\$ 845,727	\$ 403,830	\$ 1,249,557
" 71	780,454	105,598	886,052
" 72	894,083	72,640	966,723
" 105	51,352	164,135	215,487
" 116	2,945	17,457	20,402
" 119	8,981	35,738	44,719
" 125	16,822	12,566	29,388
" 128	214,853	45,473	260,326
Sec. Hwy. 594	3,075	30,006	33,081
" 596	5,701	117,339	123,040
" 598	40	5,578	5,618
" 599	—	150,461	150,461
" 601	19,043	30,209	49,252
" 603	382	5,629	6,011
" 604	128	11,317	11,445
" 605	—	22,827	22,827
" 609	—	17,368	17,368
" 618	—	10,875	10,875
" 641	5,482	34,254	39,736
" 642	9,303	19,916	29,219
" 646	—	7,179	7,179
" 647	25,946	9,483	35,429
" 657	5,772	5,118	10,890
" 659	14,167	25,316	39,483
Tertiary Road 804	8,225	6,101	14,326
" 808	6,084	5,645	11,729
Connecting Links:			
Town of Dryden	—	1,288	1,288
Town of Keewatin	—	1,034	1,034
Town of Kenora	—	3,713	3,713
Unincorporated Township Roads:			
Local Road Board	—	46,379	46,379
Statute Labour Board	5,814	42,348	48,162
Special—Settlers	10,153	5,246	15,399
Indian Reserves	—	12,069	12,069
Lands and Buildings	29,668	13,635	43,303
Miscellaneous Surveys	3,520	—	3,520
Weigh Scales	—	3,711	3,711
	<u>\$ 2,967,720</u>	<u>\$ 1,501,481</u>	<u>\$ 4,469,201</u>

District	Construction	Maintenance	Total
Manitoulin			
Highway 68	\$ 265,829	\$ 149,596	\$ 415,425
Sec. Hwy. 540	194,830	281,334	476,164
" 540A	15,578	8,164	23,742
" 542	80,292	131,526	211,818
" 542A	—	4,661	4,661
" 551	261,460	34,345	295,805
" 637	32,688	75,758	108,446
Connecting Link:			
Town of Little Current	—	3,558	3,558
Unincorporated Township Roads:			
Local Road Board	1,000	15,773	16,773
Statute Labour Board	—	8,396	8,396
Development Roads	—	8,383	8,383
Lands and Buildings	8,279	3,774	12,053
Miscellaneous Surveys	151	—	151
	<u>\$ 860,107</u>	<u>\$ 725,268</u>	<u>\$ 1,585,375</u>

District	Construction	Maintenance	Total
Muskoka			
Highway 11	\$ 391,022	\$ 230,935	\$ 621,957
" 35	663,986	34,069	698,055
" 60	19	44,568	44,587
" 69	944,828	89,090	1,033,918
" 103	3,257	73,466	76,723
" 118	601,475	110,820	712,295
Sec. Hwy. 501	61,490	40,750	102,240
" " 514	385	40,649	41,034
" " 516	179,454	37,365	216,819
" " 525	—	4,295	4,295
" " 527	378	95,040	95,418
" " 532	189,097	66,019	255,116
" " 592	2,263	712	2,975
" " 612	—	11,055	11,055
" " 632	2,944	37,468	40,412
" " 660	20,862	35,901	56,763
Connecting Links:			
Town of Bracebridge	118,646	15,153	133,799
Town of Gravenhurst	—	3,823	3,823
Town of Huntsville	—	4,494	4,494
Village of Port Carling	1,507	2,486	3,993
Unincorporated Township Roads:			
Local Road Board	10,125	21,903	32,028
Statute Labour Board	—	22,461	22,461
Development Roads	19,559	—	19,559
Lands and Buildings	160,052	13,822	173,874
	<u>\$ 3,371,349</u>	<u>\$ 1,036,344</u>	<u>\$ 4,407,693</u>

District	Construction	Maintenance	Total
Nipissing			
Highway 11	\$ 23,345	\$ 268,940	\$ 292,285
" 17	69,320	295,562	364,882
" 60	1,081,499	167,362	1,248,861
" 63	949,282	134,736	1,084,018
" 64	175,889	165,999	341,888
" 94	14,800	23,035	37,835
" 123	32,226	17,392	49,618
" 127	2,329	37,443	39,772
Sec. Hwy. 514	—	3,058	3,058
" " 523	283	46,336	46,619
" " 528	—	3,291	3,291
" " 531	—	9,676	9,676
" " 533	9,350	73,307	82,657
" " 539	4,463	68,747	73,210
" " 539A	—	2,725	2,725
" " 630	11,970	53,850	65,820
" " 656	34	2,807	2,841
Tertiary Road 805	9,911	22,306	32,217
Connecting Links:			
City of North Bay	352,929	—	352,929
Town of Sturgeon Falls	—	2,110	2,110
Unincorporated Township Roads:			
Local Road Board	139,970	83,263	223,233
Statute Labour Board	4,271	4,546	8,817
Special—Settlers	18,904	6,787	25,691
Development Roads	287,295	—	287,295
Lands and Buildings	161,479	17,764	179,243
	<u>\$ 3,349,549</u>	<u>\$ 1,511,042</u>	<u>\$ 4,860,591</u>

District	Construction	Maintenance	Total
Parry Sound			
Highway 11	\$ 391,348	\$ 228,396	\$ 619,744
" 69	10,364	208,487	218,851
" 124	517,026	127,648	644,674
Sec. Hwy. 510	—	4,522	4,522
" 518	157,858	136,551	294,409
" 520	443,842	84,059	527,901
" 522	197,409	132,194	329,603
" 524	67	10,426	10,493
" 526	2,483	7,511	9,994
" 529	—	69,168	69,168
" 529A	5,972	9,796	15,768
" 532	8,152	27,868	36,020
" 534	26,259	81,384	107,643
" 559	182	53,983	54,165
" 592	27,207	23,574	50,781
" 612	—	8,788	8,788
" 632	341	30,683	31,024
" 644	—	1,870	1,870
" 645	—	8,164	8,164
" 654	12,986	51,039	64,025
Connecting Link:			
Town of Parry Sound	—	4,656	4,656
Unincorporated Township Roads:			
Local Road Board	105,222	98,664	203,886
Statute Labour Board	22,967	100,927	123,894
Special—Settlers	—	465	465
Indian Reserves	—	2,196	2,196
Development Roads	297,970	34,181	332,151
Lands and Buildings	27,821	2,764	30,585
	<u>\$ 2,255,476</u>	<u>\$ 1,549,964</u>	<u>\$ 3,805,440</u>

District	Construction	Maintenance	Total
Rainy River			
Highway 11	\$ 72,209	\$ 265,527	\$ 337,736
" 71	556,052	51,176	607,228
" " 602	15,126	113,844	128,970
Sec. Hwy. 600	56,764	99,640	156,404
" " 611	Cr. 1,755	24,487	22,732
" " 613	13,641	50,434	64,075
" " 615	7,947	37,977	45,924
" " 617	2,785	27,466	30,251
" " 619	6,602	40,194	46,796
" " 621	17,849	51,956	69,805
" " 622	2,270	9,683	11,953
" " 623	151	4,879	5,030
" " 633	—	5,449	5,449
Connecting Links:			
Town of Fort Frances	42,795	7,054	49,849
Town of Rainy River	—	74	74
Unincorporated Township Roads:			
Local Road Board	10,004	10,516	20,520
Statute Labour Board	835	15,918	16,753
Special—Settlers	—	361	361
Indian Reserves	—	841	841
Development Roads	67,215	—	67,215
Lands and Buildings	20,698	1,651	22,349
Weigh Scales	—	1,042	1,042
	<u>\$ 891,188</u>	<u>\$ 820,169</u>	<u>\$ 1,711,357</u>

District	Construction	Maintenance	Total
Sudbury			
Highway 17	\$ 776,239	\$ 271,917	\$ 1,048,156
" 64	546	91,476	92,022
" 68	13,002	64,538	77,540
" 69	146,568	182,607	329,175
" 101	1,259,447	215,594	1,475,041
" 129	662,256	96,454	758,710
" 144	4,726,184	257,071	4,983,255
Sec. Hwy. 528	—	29,972	29,972
" 528A	—	12,942	12,942
" 535	39,107	83,211	122,318
" 536	—	12,275	12,275
" 537	49,374	32,602	81,976
" 539	10,105	15,070	25,175
" 541	21,440	36,772	58,212
" 541A	—	4,507	4,507
" 543	398,971	11,862	410,833
" 544	1,015	3,084	4,099
" 545	13,761	40,330	54,091
" 549	76,340	29,626	105,966
" 553	641	18,030	18,671
" 560	51,579	110,618	162,197
" 560A	—	14,415	14,415
" 606	—	4,455	4,455
" 607	456	22,481	22,937
" 607A	—	5,095	5,095
" 616	—	3,863	3,863
" 634	46,942	26,571	73,513
" 637	648	64,867	65,515
" 658	28,487	35,175	63,662
" 661	—	3,047	3,047
Tertiary Road 805	650	13,507	14,157
" " 806	—	9,964	9,964
Industrial Road:			
E. A. Wicks Road	—	3,659	3,659
Connecting Links:			
City of Sudbury	995,417	—	995,417
Town of Capreol	5,438	4,002	9,440
Town of Espanola	—	5,337	5,337
Unincorporated Township Roads:			
Local Road Board	84,644	141,935	226,579
Statute Labour Board	21,783	20,587	42,370
Special—settlers	—	7,603	7,603
Development Roads.	259,750	—	259,750
Lands and Buildings	139,091	31,310	170,401
Miscellaneous Surveys.	10,929	—	10,929
Sidewalks	6,562	—	6,562
	<u>\$ 9,847,372</u>	<u>\$ 2,038,431</u>	<u>\$11,885,803</u>

District	Construction	Maintenance	Total
Thunder Bay			
Highway 11	\$ 5,255,927	\$ 717,160	\$ 5,973,087
" 11A	244,973	60,982	305,955
" 17	1,411,600	785,955	2,197,555
" 61	34,473	73,437	107,910
" 130	62,225	69,616	131,841
Sec. Hwy. 580	—	11,540	11,540
" 582	—	8,454	8,454
" 584	7,368	74,094	81,462
" 584A	—	3,411	3,411
" 585	—	61,677	61,677
" 586	—	5,583	5,583
" 587	44,050	70,952	115,002
" 588	17,009	108,984	125,993
" 589	43,052	51,157	94,209
" 590	961	79,500	80,461
" 591	—	13,368	13,368
" 593	—	54,470	54,470
" 595	124,055	51,437	175,492
" 597	1,002	32,503	33,505
" 599	48,186	94,564	142,750
" 608	1,435	33,017	34,452
" 614	1,053,548	97,447	1,150,995
" 625	505	44,041	44,546
" 627	442	12,162	12,604
" 628	4,332	9,517	13,849
" 643	—	19,465	19,465
Tertiary Road 800	9,411	37,742	47,153
" 801	23,149	3,383	26,532
" 802	—	11,286	11,286
Industrial Road:			
Caramat to Manitouwadge	—	16,228	16,228
Connecting Links:			
City of Fort William	289,835	1,015	290,850
Town of Geraldton	33	3,536	3,569
Unincorporated Township Roads:			
Local Road Board	146,490	186,692	333,182
Statute Labour Board	—	1,501	1,501
Special—Settlers	—	153	153
Lands and Buildings	72,966	11,881	84,847
Miscellaneous Surveys	12	—	12
	<u>\$ 8,897,039</u>	<u>\$ 2,917,910</u>	<u>\$11,814,949</u>

District	Construction	Maintenance	Total
Timiskaming			
Highway 11	\$ 608,735	\$ 299,690	\$ 908,425
" 65	150,493	218,457	368,950
" 66	352,266	122,404	474,670
" 101	7,536	22,621	30,157
" 112	—	28,824	28,824
" 144	247,496	31,217	278,713
Sec. Hwy. 558	23,224	53,031	76,255
" " 560	117,975	199,449	317,424
" " 562	985	27,076	28,061
" " 564	33,699	22,585	56,284
" " 566	3,692	30,542	34,234
" " 567	42	56,861	56,903
" " 568	—	3,277	3,277
" " 569	—	51,096	51,096
" " 570	—	5,844	5,844
" " 571	—	11,034	11,034
" " 573	16,510	36,497	53,007
" " 624	278,694	56,816	335,510
" " 640	—	4,964	4,964
" " 650	1,052	10,350	11,402
Industrial Road:			
E. A. Wicks Road	—	4,200	4,200
Connecting Links:			
Township of Teck	9,391	5,607	14,998
Town of Cobalt	24,861	4,589	29,450
Town of Haileybury	—	5,423	5,423
Town of New Liskeard	355,796	8,642	364,438
Unincorporated Township Roads:			
Local Road Board	33,408	43,399	76,807
Statute Labour Board	3,471	26,800	30,271
Special—Settlers	2,334	2,849	5,183
Development Roads	122,176	—	122,176
Lands and Buildings	2,422	12,065	14,487
Miscellaneous Surveys	27	—	27
Weigh Scales	9,346	1,823	11,169
	<u>\$ 2,405,631</u>	<u>\$ 1,408,032</u>	<u>\$ 3,813,663</u>
County and District Totals	\$195,508,490	\$ 51,358,227	\$246,866,717
Sundry Unallocated, District Office, Administrative, Engineering, Building, Inventory, Charges etc.	1,549,827	12,276,491	13,826,318
Total Expenditure	<u>\$197,058,317</u>	<u>\$ 63,634,718</u>	<u>\$260,693,035</u>

APPENDIX No. 2

Development Road Expenditure in Municipalities by County and Territorial District

(Authorized by Part XI of The Highway Improvement Act)

April 1, 1968 to March 31, 1969

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County or Territorial District
Brant					
853	County Road 13 (part)	2.8	County	\$ 413,456	
888	Blossom Avenue (extension)	3.5	County	383,389	
929	County Roads 50 and 51	1.0	Paris, Town	116,247	
937	County Road 8 (part)	1.8	County	1,883	
938	County Road 36	0.7	County	14,418	
939	County Roads 3, 4, and 16 (part)	2.4	County	165,381	
961	County Road 18 (part)	—	County	21,763	\$1,116,53
Bruce					
758	County Road 3 (part)	12.5	County	\$ 23,631	
A 799	Ashfield-Huron Townline	0.7	Huron	6,226	
819	County Road 13A (part)	1.0	County	40,072	
887	Purple Valley Road	3.0	Albemarle	1,220	\$ 71,1
Dufferin					
777	County Road 10 (part)	6.9	County	cr. \$ 55	
841	County Road 18 (part)	12.5	County	412,317	\$ 412,2
Elgin					
840	County Road 52 (part)	12.1	County	\$ 222,727	
930	County Road 45 (part)	12.3	County	6,330	
931	County Road 20 (part)	5.8	County	586,894	
972	County Roads 47 and 48 (part) and 49	8.9	County	214,857	\$1,030,8
Frontenac					
806	Road from Hwy. 7 to Olden—Hinchinbrooke Bdry	7.7	Olden	\$ 24,083	
861	County Road 3 (part)	7.9	County	349,752	
862	County Road 10 (part)	5.2	County	309,494	
863	County Road 11A (part)	2.6	County	8,698	
905	Plevna—Ompah Road (part)	6.7	Clarendon and Miller	2,392	
906	Snow Road Stat.—Ompah-Plevna Road (part)	15.0	Palmerston and North and South Canonto	17,822	
957	County Road 10 (part)	3.5	County	176,547	
973	Clarendon Road	11.2	Clarendon and Miller	35,751	
1010	County Road 4A (Wilton Road)	—	County	9,536	
1011	County Road 10 (part)	—	County	3,479	\$ 937,5

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Grey					
715	Road to Ontario Hospital	2.0	Sydenham	\$ 1,535	
783	County Road 13	25.0	County	928,593	
886	County Road 10 (part)	17.5	County	143,174	\$1,073,302
Haldimand					
791	County Road 12 (part)	6.4	County	\$ 293,126	
934	Sandusk Sideroad (part)	8.9	Walpole	5,431	\$ 298,557
Hastings					
711	County Road 4	4.5	County	\$ 3,093	
740R	Balsam Lake to Jones Bdry. (ext. of D.R. 494)	4.0	Bangor, Wicklow and McClure	8,229	
801	Weslemkoon Road	11.0	Tudor and Cashel	284,074	
802	Road Between Lots 11/12	2.4	Madoc	4,401	
805	Road along C.N.R. Right-of-Way (Baptiste Sta.)	3.1	Herschel	15,437	
824	County Road 12 (part)	7.2	County	129,770	
855	County Road 9 (part)	5.6	County	468,478	
856	County Road 3	7.8	County	219,463	
882	Madawaska Road (part)	4.8	Bangor, Wicklow and McClure	28,305	
883	Road Between Conc. VII/VIII	4.0	Tyendinaga	4,261	
914	County Roads 7A and 13 (part)	2.0	County	2,233	
970	Wallaston Lake Townline Road	6.0	Wollaston	33,722	
978	Fort Stewart Road—McNeaul Hill	1.6	Carlow	10,387	
979	Musclow Road (part)	5.4	Monteagle	34,104	\$1,245,957
Huron					
A 799	Ashfield-Huron Townline	0.6	Ashfield	\$ 6,226	
898	County Road 12 (part)	1.3	County	7,167	
899	County Road 3 (part)	4.2	County	403,509	
904	County Road 8 (part)	6.5	County	6,715	\$ 423,617
Lambton					
B 724	County Roads 12 and 6A	1.5	County	\$ 595	
733	Tri County Bridge to Hwy. 21	2.7	Bosanquet	17,364	
837	County Road 5 (part)	8.1	County	482,629	
857	County Road 4 (part)	5.4	County	198	
858	County Road 2 (part)	4.4	County	594,017	
954	County Road 4 (part)	3.8	County	4,607	
955	County Road 4 (part)	3.8	County	10,109	\$1,109,519

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Lanark					
613	Fallbrooke Westerly	8.0	Bathurst	\$ 96,168	
779	Black Creek Road	6.4	Lavant	2,547	
820	County Road 20 (part)	4.3	County	85	
821	County Road 20 (part)	2.0	County	26,439	
844	County Road 1A	6.4	County	396,736	
845	County Road 5A (part)	3.8	County	191,442	
846	County Road 5 (part)	6.1	County	71,134	
932	County Road 6B	12.1	County	4,269	
933	County Road 3A (part)	9.2	County	3,727	
992	Township Road	—	Drummond	6,553	
995	Road Between conc. VIII/IX	1.4	Beckwith	25,000	
1008	County Road 4 (part)	—	County	18,576	\$ 842,676
Leeds and Grenville					
792	County Road 5A	2.1	County	\$ 15,051	
859	County Road 3 (part)	3.3	County	157,193	
860	County Road 22 (part)	5.3	County	98,452	
916	County Road 13 (part)	6.2	County	264,257	
940	Athens-Addison Road (part)	2.1	County	3,691	
941	Athens-Addison Road (part)	0.9	County	2,495	
971	County Road 5 (part)	7.8	County	15,531	\$ 556,670
Lennox and Addington					
761	Dorland—Sir John A. Macdonald Monument	3.8	Adolphustown	\$ 42,841	
868	County Road 9 (part)	4.8	County	359,021	
900	County Road 3	1.7	County	3,357	
902	Vennacher Road	2.7	Denbigh, Abinger and Ashby	686	
907	County Road 14 (part)	4.2	County	324,104	
908	County Road 8 (part)	2.9	County	48,351	
981	Proposed County Road	—	County	21,215	
984	Carmanville Road (part)	0.3	Camden East	3,527	
999	County Road 6A (part)	—	County	2,467	
1000	County Road 14 (part)	—	County	3,226	
1001	County Road 4 (part)	—	County	4,282	
1006	Hay Bay Road	6.0	Fredericksburgh South	112,360	\$ 925,437
Lincoln					
C 683	Lincoln and Welland County Line	7.2	County	\$ 100,194	
787	South Chippawa Road	7.2	Caistor	303,324	\$ 403,518
Middlesex					
B 724	County Roads 12 and 6A	5.5	County	\$ 3,274	\$ 3,274
Norfolk					
847	County Road 20 (part)	3.3	County	\$ 56,604	
895	County Road 30 (part)	4.6	County	136,066	
958	County Road 29 (part)	2.5	County	299,380	\$ 492,050

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Northumberland and Durham					
704	Roseneath Easterly	2.9	Alnwick	\$ 15,667	
725	Road between Lots 8 and 9, Conc. B.A. 1 and 2	3.0	Murray	8,605	
800	County Road 38 (part)	0.4	County	6,617	
818	County Road 70 (part)	1.7	County	68,567	
919	Proposed County Road	2.9	County	4,721	
920	County Road 18 (part)	4.6	County	123,229	
944	Proposed County Road 9 (ext.)	3.0	County	7,754	
945	Proposed County Road	3.0	County	6,656	
946	Proposed County Road	4.2	County	8,323	
947	Colborne to Lakeport Road	2.7	County	469	\$ 250,608
Ontario					
848	County Road 12 (part)	4.3	County	\$ 390,439	
849	County Road 1A	2.1	Reach	78,912	
850	County Road 11A (part)	2.8	County	160,358	
959	County Road 4 (part)	7.5	Whitby and Pickering	43,653	
960	Proposed County Road	13.4	County	18,006	\$ 691,368
Ottawa-Carleton					
754	Dwyer Hill Road	10.4	Goulbourn	\$ 164,202	
822	Road from County Road 26 to Marlborough-Goulbourn Bdry.	4.5	Marlborough	50,207	
823	Conc. X/XI Road	5.8	Huntley	65,606	
953	Road between Conc. II/III	3.9	Fitzroy	133,311	\$ 413,326
Oxford					
793	Lass Bridge	—	Blenheim	\$ 7,599	
794	Wolverton Bridge	—	Blenheim	3,544	\$ 11,143
Peel					
744	Twentieth Sideroad	4.7	Albion	\$ 32,451	\$ 32,451
Peterborough					
587R	Havelock to Lasswade Road (part)	17.7	Belmont and Methuen	\$ 319,805	
659	Ninth Line Road	12.0	Dummer	12,869	
700	Stoney Lake North Shore Road	5.5	Burleigh and Anstruther	4,418	
832	County Road 2 (part)	4.5	County	430,043	
833	County Road 6 (part)	5.1	County	357,201	
838	County Road 4 (part)	9.4	County	431,287	
966	Proposed County Road 50	—	County	8,789	
967	Proposed County Road 34 (part)	4.0	County	22,866	
968	Proposed County Road (part) Twin Lakes to Lasswade	—	County	41,148	
996	County Road 24	—	County	2,871	\$1,631,297

		Jurisdiction			Total by
Road		Length	(Township unless		County &
Number	Description and Location	(miles)	otherwise indicated)	Expenditure	Territorial District
Prescott and Russell					
773	County Road 2 (part)	15.6	County	cr. \$ 20	
789	County Road 18	6.3	County	427	
864	County Road 9 (part)	7.9	County	474,429	
865	County Road 15 (part)	8.3	County	571,497	
956	County Road 1 (part)	8.3	County	3,223	
969	County Road 3 (part)	5.6	County	103,206	
985	County Road 15 (part)	—	County	10,100	
1002	County Road 10A (part)	—	County	11,606	
1003	County Road 14 (part)	—	County	21,706	
1004	County Road 7 (part)	—	County	12,000	
1005	County Road 2 (part)	—	County	9,675	\$1,217,849
Prince Edward					
817	County Roads 7 and 8 (part)	8.3	County	\$ 68,714	
866	County Road 12 (part)	3.0	County	317,316	
867	County Roads 9, 13 and 17A (part)	4.7	County	315,867	
942	County Roads 10 and 18 (part)	5.5	County	429,333	
943	County Road 5 (part)	4.4	County	10,229	
993	County Road 9 (part)	—	County	18,555	
994	County Road 7 (part)	—	County	28,272	\$1,188,280
Renfrew					
541	Admaston to Bagot Townline Road	10.4	Admaston, Bagot and Blythfield	\$ 187,273	
738	Hardwood Lake to Palmer Rapids	7.0	Raglan	3,060	
795	Barry's Bay Road	9.1	Sherwood, Jones and Burns	45,454	
796	Opeongo Road	10.2	Sebastopol	351,184	
797	Opeongo Road (part)	6.6	Brudenell and Lyndoch	295,475	
798	Ruby Road	7.9	South Algona	218,219	
897	Opeongo Road	6.0	Grattan	6,695	
980	Ruby Road (part)	2.0	Hagarty and Richards	11,896	
1014	Road between Conc. VI/VII	2.5	Alice and Fraser	2,498	\$1,121,754
Simcoe					
760	Tenth Side Road	7.7	Tecumseth	\$ 106,639	\$ 106,639
Stormont, Dundas and Glengarry					
768	Brinston Easterly Road	3.8	Matilda	\$ 6,993	
788	County Road 24 (part)	9.4	County	143,938	
839	County Road 12 (part)	6.3	County	191,777	
921	County Road 15 (part)	9.0	County	13,299	
922	County Road 23 (part)	4.9	County	3,525	
923	County Road 12 (part)	8.4	County	138,699	
924	County Road 1 (part)	6.9	County	368,322	
982	Road between Conc. V/VI	3.2	Kenyon	5,169	
983	Post Road (part)	0.8	Cornwall	8,516	
998	Various Township Roads	—	Charlottenburgh	25,764	\$ 906,002

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Victoria					
775	County Road 23 (part)	5.6	County	\$ 31,438	
842	County Road 5 (part)	6.3	County	318,401	
843	County Road 4 (part)	5.5	County	447,253	
851	County Road 8	14.4	County	228,804	
852	Road Westerly from Hwy. 121	2.3	Somerville	331,920	
991	County Road 4 (part)	—	County	9,143	\$1,366,959
Welland					
C 683	Lincoln and Welland County Line	7.2	County	\$ 100,193	
990	County Road 9A (part)	—	County	26,228	\$ 126,421
Wellington					
825	County Road 53 (part)	10.5	County	\$ 514,481	
834	County Road 18 (part)	6.4	County	417,823	
835	County Road 26 (part)	9.5	County	454,309	
986	County Road 34 (part)	—	County	25,253	
937	County Road 8 (part)	—	Palmerston, Town	4,798	
988	County Road 18 (part)	—	County	21,876	
989	County Road 7 (part)	—	County	17,054	\$1,455,594
Algoma					
815	Little Rapids Bridge	0.1	Thessalon	\$ 64,312	\$ 64,312
Cochrane					
901	Brunelle Road	1.0	Kapuskasing, Town	\$ 134,400	
997	Genier Road and Glackmeyer- Blount Townline	12.2	County	1,570	\$ 135,970
Haliburton					
912	County Road No. 1	14.4	County	\$ 96,384	
975	Proposed Kawagama Lake Road	5.0	Sherbourne, McClintock and Livingstone	23,538	\$ 119,922
Manitoulin					
948	Bidwell Road (part)	12.1	Assignack	\$ 5,479	
949	Bidwell Road (part)	8.0	Howland	2,904	\$ 8,383
Muskoka					
962	West Road (part) John and Elm Streets	0.4	Huntsville, Town	\$ 2,824	
963	Brunel Road (part)	2.0	Port Sydney, Village	8,088	
964	Housey's Rapids to Barkway Road	4.4	Ryde	1,096	
1007	Brunel Road (part)	—	Stephenson	7,551	\$ 19,559
Nipissing					
656	Caderette Corners to Hwy. 64	4.2	Caldwell	\$ 9,326	
743	Trout Lake Road	4.5	East Ferris	48,579	
782	Powassan to Rutherglen Road (part)	3.8	Bonfield	63,813	
873	Road between Lots 1 and 2 south- erly from Hwy. 17	2.3	Springer	165,577	\$ 287,295

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Parry Sound					
790	Road between Conc. X/XI (part)	0.7	Joly	\$ 46,680	
828	Mill Street East	0.3	Powassan, Town	394	
829	Great North Road	1.2	Parry Sound, Town	207,025	
965	Whitestone Lake Road (part)	0.9	Hagerman	33,441	
974	Cardwell Road (part)	0.5	Rosseau, Village	1,932	
976	McKellar Centre Road (part)	2.8	McKellar	16,233	
977	Eagle Lake Road (part)	—	Machar	25,706	
1012	Magnetawan River Bridge	—	Kearney, Town	740	\$ 332,151
Rainy River					
874	Township Road	7.1	Worthington	\$ 67,215	\$ 67,215
Sudbury					
830	Whitson Creek Bridge	0.1	Chelmsford, Town	\$ 53,870	
913	Garson to Coniston	4.7	Neelon and Garson	120,504	
918	Road in Lots 13 and 14, Conc. IV	1.0	Hagar	21,377	
951	Lee Valley Road (part)	8.0	Hallam	60,163	
1013	Vermilion Lake Road	—	Dowling	3,836	\$ 259,750
Timiskaming					
809	Blanche River Ridge	0.1	Evanturel	\$ 3,940	
831	Little Otter Creek Bridge	0.1	Hilliard	60,335	
926	Bear Creek Bridge	—	Dymond and Harley	57,901	\$ 122,176
Totals		978.9			\$22,879,317

Development Roads split into two counties

- A Huron and Bruce
- B Middlesex and Lambton
- C Lincoln and Welland

APPENDIX No. 3

Unincorporated Townships Statute Labour Board Road Expenditure by
Territorial Districts
(Part XII, The Highway Improvement Act)

April 1, 1968 to March 31, 1969

Location and Name	Statute Labour Board Expenditure Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Algoma				
Aweres No. 1	\$ 1,007	\$ 944	—	\$ 1,951
Aweres No. 2	910	50	—	960
Dennis	778	599	—	1,377
Deroche	884	1,014	—	1,898
Fenwick and Kars	4,592	4,972	—	9,564
Havilland	4,100	3,872	\$ 1,267	9,239
Ranger Lake Road	194	5,308	15,299	20,801
Shedden	45	45	—	90
Shields and Gaudette	1,370	2,073	—	3,443
Striker and Cobden	407	100	—	507
Tilley	367	1,700	—	2,067
	<u>\$ 14,654</u>	<u>\$ 20,677</u>	<u>\$ 16,566</u>	<u>\$ 51,897</u>
Cochrane				
Brower West	—	\$ 1,294	—	\$ 1,294
Calder	—	992	—	992
Casgrain	—	3,149	—	3,149
Devitt	—	713	\$ 1,719	2,432
Eilber and Devitt	—	692	—	692
Evelyn	\$ 1,922	1,169	—	3,091
Fox-Brower	—	1,715	—	1,715
German and Matheson	1,385	3,500	—	4,885
Hanlan and Way	—	614	—	614
Kendall No. 1	—	3,006	243	3,249
Kendall No. 2	—	1,545	—	1,545
Kennedy	—	1,441	—	1,441
Lamarche	—	445	—	445
Leclair Avenue	821	506	—	1,327
Lowther and Way	—	5,827	—	5,827
Nordica, McEvay, and McCann	1,180	1,015	—	2,195
Ogden	4,027	4,570	—	8,597
Shaw	436	91	—	527
Way	—	4,683	—	4,683
	<u>\$ 9,771</u>	<u>\$ 36,967</u>	<u>\$ 1,962</u>	<u>\$ 48,700</u>

Location and Name	Statute Labour Board Expenditure Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expenditure
Kenora				
Aubrey East	\$ 991	\$ 3,182	—	\$ 4,173
Colenso, Redvers East and Wabigoon	1,303	407	—	1,710
Eton	2,560	2,263	—	4,823
Melgund	533	1,586	—	2,119
Mutrie	1,989	1,799	—	3,788
Pellatt No. 1	1,877	1,373	—	3,250
Pellatt No. 2	2,659	1,586	—	4,245
Rowell	298	822	—	1,120
Rugby	894	1,142	—	2,036
Southworth	1,353	4,213	—	5,566
Umbach Ut. N. of	2,018	2,587	\$ 700	5,305
Van Horne	1,432	2,774	—	4,206
Vermilion Add'l.	1,067	CR. 188	—	879
Wabigoon West Redvers	1,734	3,981	—	5,715
Wainwright, Eton Lot 1	1,754	3,580	—	5,334
Zealand No. 1	8,325	9,994	—	18,319
Zealand No. 3	816	1,247	5,114	7,177
	<u>\$ 31,603</u>	<u>\$ 42,348</u>	<u>\$ 5,814</u>	<u>\$ 79,765</u>
Manitoulin				
Mills	\$ 1,016	\$ 1,016	—	\$ 2,032
Robinson	10,580	7,380	—	17,960
	<u>\$ 11,596</u>	<u>\$ 8,396</u>	<u>—</u>	<u>\$ 19,992</u>
Muskoka				
Baxter	\$ 21,000	\$ 20,078	—	\$ 41,078
Gibson North	293	448	—	741
Go Home Lake	CR. 1,845	1,757	—	CR. 8
Sinclair	178	178	—	356
	<u>\$ 19,626</u>	<u>\$ 22,461</u>	<u>—</u>	<u>\$ 42,087</u>
Nipissing				
Badgerow No. 1	\$ CR. 35	\$ 1,477	\$ 4,271	\$ 5,783
Dickens	1,585	2,975	—	4,560
Gibbons	—	3	—	3
Tasso Lake	CR. 394	—	—	CR. 394
West Oxbow Lake	91	91	—	182
	<u>\$ 1,247</u>	<u>\$ 4,546</u>	<u>\$ 4,271</u>	<u>\$ 10,064</u>

Location and Name	Statute Labour Board Expenditure Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Parry Sound				
Bethune	\$ 278	\$ 278	—	\$ 556
Blair and Mowat	2,393	4,967	—	7,360
Conger North	8,007	4,024	—	12,031
Croft.	2,066	2,066	—	4,132
Ferguson	358	358	—	716
Ferrie	944	944	—	1,888
Gurd	10,806	12,176	—	22,982
Laurier	4,621	4,038	—	8,659
McKenzie and Burpee	CR. 125	—	—	CR. 125
Mills and Hardy	21,918	12,589	—	34,507
Monteith	7,900	9,431	\$ 3,662	20,993
Patterson	10,144	14,922	19,305	44,371
Pringle	9,268	7,595	—	16,863
Proudfoot.	3,087	3,087	—	6,174
Spence.	9,411	12,707	—	22,118
Wallbridge South.	1,238	2,674	—	3,912
Wilson and McConkey.	9,641	9,071	—	18,712
	<u>\$ 101,955</u>	<u>\$ 100,927</u>	<u>\$ 22,967</u>	<u>\$ 225,849</u>
Rainy River				
Dance	\$ 1,686	\$ 2,719	—	\$ 4,405
Miscampbell.	1,347	1,324	—	2,671
Nelles	2,124	3,848	\$ 835	6,807
Sifton	760	6,084	—	6,844
Spohn	781	622	—	1,403
Sutherland	1,990	1,321	—	3,311
	<u>\$ 8,688</u>	<u>\$ 15,918</u>	<u>\$ 835</u>	<u>\$ 25,441</u>
Sudbury				
Bigwood	—	\$ 282	—	\$ 282
Broder and Dill.	\$ 430	669	—	1,099
Cleland, Dryden, Awrey and Hawley	CR. 54	571	\$ 1,897	2,414
Delamere	—	32	—	32
Dryden Centre.	317	689	—	1,006
Foleyet.	761	627	—	1,388
Foster and Truman	1,595	2,290	—	3,885
Henry	1,244	624	19,886	21,754
MacLennan West	1,238	1,669	—	2,907
McKinnon	355	224	—	579
Merritt	3,686	3,382	—	7,068
Scollard	2,898	2,491	—	5,389
Street, Scadding and Rathburn	3,960	7,037	—	10,997
	<u>\$ 16,430</u>	<u>\$ 20,587</u>	<u>\$ 21,783</u>	<u>\$ 58,800</u>
Thunder Bay				
Armstrong	—	\$ 166	—	\$ 166
Devon	\$ 622	815	—	1,437
RosSPORT	—	520	—	520
	<u>\$ 622</u>	<u>\$ 1,501</u>	<u>—</u>	<u>\$ 2,123</u>

Location and Name	Statute	Department	Department	Total
	Labour Board Expenditure Ordinary	Expenditure Ordinary	Expenditure Capital	Expendi- ture
Timiskaming				
Bayly	\$ 1,282	\$ 1,339	—	\$ 2,621
Benoit and Maisonville	2,538	1,643	\$ 3,471	7,652
Cairo	990	1,277	—	2,267
Cane	5,646	3,450	—	9,096
Eby	2,104	1,912	—	4,016
Eby North	421	228	—	649
Grenfell	485	456	—	941
Ingram	245	245	—	490
Keefer	1,749	1,060	—	2,809
Lebel, Harvey and Kirkland	558	38	—	596
Lebel, King and Kirkland	4,216	3,797	—	8,013
Marquis North and Otto South-West	2,664	3,145	—	5,809
Marter	4,248	3,663	—	7,911
Nordica, McEvay, McCann	2,360	2,030	—	4,390
Ossian East ½	1,663	966	—	2,629
Pacaud	1,629	740	—	2,369
Pacaud and Catharine	863	811	—	1,674
	<u>\$ 33,661</u>	<u>\$ 26,800</u>	<u>\$ 3,471</u>	<u>\$ 63,932</u>
 Total Statute Labour Board Expenditure	 <u>\$ 249,853</u>	 <u>\$ 301,128</u>	 <u>\$ 77,669</u>	 <u>\$ 628,650</u>

APPENDIX No. 4

Unincorporated Townships Local Road Board Expenditure by Territorial Districts

(Part XII, The Highway Improvement Act)

April 1, 1968 to March 31, 1969

Location and Name	Local Road Board Expenditure (Deposit) Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Algoma				
Aberdeen and McMahon	\$ 2,700	\$ 7,602	\$ 17,633	\$ 27,935
Colonization	300	65	—	365
Fenwick et al	5,000	11,550	16,495	33,045
Galbraith-Morin	1,200	271	15,620	17,091
Gaudette and Hodgins	1,700	3,701	—	5,401
Hawk Junction	1,000	3,862	902	5,764
Lewis and Spragge	800	1,870	—	2,670
Patton and Montgomery	925	4,708	—	5,633
Plummer and Rose	78	6,335	—	6,413
Spanish	5,000	8,308	—	13,308
Striker	1,300	5,146	—	6,446
Vankoughnet and Aweres	2,030	9,567	10,402	21,999
Whiskey Lake	273	1,270	2,902	4,445
	<u>\$ 22,306</u>	<u>\$ 64,255</u>	<u>\$ 63,954</u>	<u>\$ 150,515</u>
Cochrane				
Brower	\$ 700	\$ 1,983	—	\$ 2,683
Casgrain	818	1,612	\$ 2,000	4,430
Coppel	1,400	3,809	57	5,266
Driftwood	2,400	1,074	—	3,474
Dunning	2,550	3,188	—	5,738
Fournier	1,950	6,914	4,415	13,279
Frederickhouse	1,950	5,788	4,599	12,337
Hanlan	2,500	3,066	256	5,822
Hallebourg	3,000	8,230	—	11,230
Hunta	6,600	7,195	2,768	16,563
Kendall	3,000	2,789	55	5,844
Lamarche	4,000	6,752	1,327	12,079
Mattice	9,000	8,992	3,130	21,122
Norembega	500	2,444	—	2,944
Opastika	3,385	11,717	—	15,102
Sheraton and Macklem	330	462	—	792
Tunis	2,000	1,769	—	3,769
Val Cote	950	2,507	—	3,457
Val-Rita-Harty	6,550	23,498	200	30,248
Way	6,500	6,084	—	12,584
	<u>\$ 60,083</u>	<u>\$ 109,873</u>	<u>\$ 18,807</u>	<u>\$ 188,763</u>

Location and Name	Local Road Board Expenditure (Deposit) Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Kenora				
Abram's Lake	\$ 220	\$ 809	—	\$ 1,029
Blindfold	450	2,451	—	2,901
Britton	1,580	6,029	—	7,609
Drayton Reserve	1,292	2,653	—	3,945
Ena Lake	350	1,874	—	2,224
Inglis Lake	565	1,714	—	2,279
Kendall Inlet	625	2,424	—	3,049
Kendricia	545	2,599	—	3,144
McCallum Point	500	856	—	1,356
Moose Horn	525	495	—	1,020
Redditt	1,400	3,777	—	5,177
Rush Bay-Woodchuck Bay	1,850	11,298	—	13,148
Sherwood Lake	2,100	7,600	—	9,700
White Moose	700	1,800	—	2,500
	<u>\$ 12,702</u>	<u>\$ 46,379</u>	<u>—</u>	<u>\$ 59,081</u>
Manitoulin				
Campbell	\$ 5,200	\$ 9,693	—	\$ 14,893
Dawson	2,200	3,960	—	6,160
Mills	3,600	2,120	\$ 1,000	6,720
	<u>\$ 11,000</u>	<u>\$ 15,773</u>	<u>\$ 1,000</u>	<u>\$ 27,773</u>
Muskoka				
Hiawatha	\$ 100	\$ 1,026	—	\$ 1,126
Sinclair	4,400	12,547	\$ 10,125	27,072
South Gibson	2,140	8,330	—	10,470
	<u>\$ 6,640</u>	<u>\$ 21,903</u>	<u>\$ 10,125</u>	<u>\$ 38,668</u>
Nipissing				
Badgerow No. 2	\$ 1,050	\$ 3,118	\$ 28,877	\$ 33,045
Ballantyne and Laurier	300	1,319	7,980	9,599
Bastedo	200	445	—	645
Crerar and North-West Gibbons	1,650	5,420	—	7,070
East Oxbow Lake	232	496	—	728
Falconer et al	2,275	7,766	2,066	12,107
Gibbons	1,000	3,549	—	4,549
Grant-Fell	1,450	6,933	—	8,383
Hay Lake	650	2,757	—	3,407
Hugel and South-West Badgerow	2,400	8,245	14,086	24,731
Kirkpatrick	3,100	8,279	1,365	12,744
Macpherson	4,287	12,953	11,202	28,442
Murchison	700	2,723	2,000	5,423
North McKenzie Lake	360	1,683	—	2,043
Phelps	3,500	9,099	4,792	17,391
Sabine	365	1,327	—	1,692
South McKenzie Lake	239	886	700	1,825
Tasso Lake	850	1,177	6,550	8,577
Thorne	1,000	2,189	2,488	5,677
Tonomo Lake	700	CR. 69	57,864	58,495
West Oxbow Lake	1,385	2,230	—	3,615
Wyse-Poitras	150	738	—	888
	<u>\$ 27,843</u>	<u>\$ 83,263</u>	<u>\$ 139,970</u>	<u>\$ 251,076</u>

Location and Name	Local Road Board			
	Expenditure (Deposit) Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expenditure
Parry Sound				
Ahmic Lake	\$ 2,500	\$ 5,072	—	\$ 7,572
Ballantyne and Laurier	300	1,319	\$ 7,980	9,599
Bethune	2,240	11,530	130	13,900
Britt	4,500	13,050	9,380	26,930
Croft	4,900	11,460	554	16,914
East Bear Lake	400	1,099	2,279	3,778
Ferguson	2,000	6,152	2,795	10,947
Ferrie	325	858	4,262	5,445
Lount	2,800	17,549	36,366	56,715
McKenzie, East Burpee and Burton	5,282	6,669	20,819	32,770
Pointe-au-Baril	1,250	2,529	—	3,779
Proudfoot	3,500	7,465	—	10,965
South Conger	5,100	17,066	20,657	42,823
Spence	—	CR. 3,154	—	CR. 3,154
	<u>\$ 35,097</u>	<u>\$ 98,664</u>	<u>\$ 105,222</u>	<u>\$ 238,983</u>
Thunder Bay				
Armstrong	—	\$ 828	—	\$ 828
Beaver Bay	\$ 231	731	—	962
Camp 25	150	877	\$ 395	1,422
Crescent Point	145	696	—	841
Dawson Road	4,000	10,000	4,953	18,953
Forbes	2,301	10,580	7,870	20,751
Fowler	4,300	12,602	18,490	35,392
Goldie	250	179	—	429
Gorham	8,500	19,510	7,585	35,595
Hardwick	1,290	4,961	4,869	11,120
Inwood	3,400	13,143	30,485	47,028
Jacques	2,900	9,871	1,992	14,763
Kabaigon Bay	318	1,572	—	1,890
Lybster	3,300	16,348	3,840	23,488
Lyon	475	2,072	—	2,547
Macdiarmid	252	1,483	—	1,735
Marks	2,350	7,092	14,931	24,373
Pearson	2,300	10,995	6,762	20,057
Pineridge	143	595	—	738
Polly Lake	530	1,861	—	2,391
Portage Bay	127	626	—	753
Rinta's	72	331	—	403
Rossmere Bay	345	1,369	—	1,714
Rosspoint	—	57	—	57
Savant Lake	290	1,438	—	1,728
Scoble	3,700	11,522	5,065	20,287
Shebandowan Lake	500	1,902	—	2,402
Sibley	1,250	6,326	6,871	14,447
Stirling	1,500	6,983	—	8,483
Strang	1,690	5,156	4,969	11,815
Sunny Slopes	150	538	—	688
Upsala	2,400	5,800	6,907	15,107
Ware	8,100	17,678	20,506	46,284
West Loon Lake	321	970	—	1,291
	<u>\$ 57,580</u>	<u>\$ 186,692</u>	<u>\$ 146,490</u>	<u>\$ 390,762</u>

Location and Name	Local Road Board			Total Expenditure
	Expenditure (Deposit) Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	
Timiskaming				
Beauchamp	\$ 2,000	\$ 6,596	\$ 12,870	\$ 21,466
Henwood	4,500	6,938	793	12,231
Ingram	2,200	8,166	—	10,366
Otto	1,975	5,204	7,066	14,245
Robillard	3,400	7,772	12,186	23,358
Savard	3,350	8,723	493	12,566
	<u>\$ 17,425</u>	<u>\$ 43,399</u>	<u>\$ 33,408</u>	<u>\$ 94,232</u>
 Total Local Road Board Expenditure	 <u>\$ 310,243</u>	 <u>\$ 822,652</u>	 <u>\$ 613,624</u>	 <u>\$1,746,519</u>

APPENDIX No. 5

Unincorporated Townships Special Road Expenditure for Settlers by Territorial Districts

(Part XII, The Highway Improvement Act)

April 1, 1968 to March 31, 1969

Location and Name	Local Contributions Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Algoma				
Cobden	\$ 49	\$ 49	—	\$ 98
Fisher	6	6	—	12
Grasett.	25	26	—	51
Herrick.	6	6	—	12
Kehoe	50	50	—	100
Kirkwood	55	56	—	111
Parkinson.	117	116	—	233
Shedden	15	15	—	30
Wells	23	22	—	45
	<u>\$ 346</u>	<u>\$ 346</u>	<u>—</u>	<u>\$ 692</u>
Cochrane				
Colquhoun	\$ 61	\$ 61	—	\$ 122
Macklem	241	241	—	482
Matheson.	74	115	—	189
Munro	249	CR. 32	—	217
O'Brien.	250	250	—	500
Warden	249	CR. 32	—	217
	<u>\$ 1,124</u>	<u>\$ 603</u>	<u>—</u>	<u>\$ 1,727</u>
Rainy River				
Dewart.	\$ 650	\$ 7,513	\$ 10,004	\$ 18,167
Marion Lake.	160	881	—	1,041
Reef Point	1,350	2,122	—	3,472
	<u>\$ 2,160</u>	<u>\$ 10,516</u>	<u>\$ 10,004</u>	<u>\$ 22,680</u>

Location and Name	Local Contributions Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expenditure
Sudbury				
Armstrong Lake	\$ 615	\$ 3,382	—	\$ 3,997
Bigwood, Delamere and Hoskin	6,000	21,003	\$ 8,059	35,062
Broder-Dill	7,550	16,175	1,000	24,725
Burwash-Hendrie	3,200	9,707	481	13,388
Cartier	1,000	1,360	—	2,360
Dieppe	450	887	—	1,337
Dill Lake	321	519	1,446	2,286
Dill-Secord	500	1,878	1,332	3,710
Downes Lake	110	653	—	763
Dry Pine Bay	2,700	2,952	3,398	9,050
Dryden South	1,300	3,705	2,000	7,005
Fairbank Lake East	3,400	6,508	—	9,908
Falconer et al	225	890	230	1,345
Haitey Bay	828	1,960	5,839	8,627
Hess	234	662	—	896
Long Lake	5,500	11,216	—	16,716
Lorne	4,500	10,478	7,838	22,816
Loughrin	550	2,612	18,030	21,192
Louise	4,000	12,040	15,354	31,394
MacLennan East	1,800	3,721	1,000	6,521
Macpherson	226	682	—	908
Ministic Lake	650	2,320	—	2,970
Norman Townsite	1,300	113	—	1,413
Red Deer	1,773	6,424	7,436	15,633
Rock Lake	300	2,885	—	3,185
Shakespeare	1,000	1,771	1,293	4,064
St. Cloud	1,065	3,637	2,804	7,506
Sunnyside	6,100	11,126	7,104	24,330
Wanapitei Lake-West Bay	210	669	—	879
	<u>\$ 57,407</u>	<u>\$ 141,935</u>	<u>\$ 84,644</u>	<u>\$ 283,986</u>
Kenora				
Bradshaw	\$ 195	\$ 195	—	\$ 390
Buller	103	104	—	207
Drayton	185	185	—	370
Ewart	2,549	2,549	—	5,098
Gidley	43	44	—	87
Gundy	17	17	—	34
Kirkup	209	209	—	418
Pellatt	799	799	—	1,598
Slaght	16	16	—	32
Smellie	976	976	\$ 10,153	12,105
Southworth	152	152	—	304
	<u>\$ 5,244</u>	<u>\$ 5,246</u>	<u>\$ 10,153</u>	<u>\$ 20,643</u>

Location and Name	Local Con- tributions Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Nipissing				
Boulter	\$ 63	\$ 64	—	\$ 127
Dickens	57	57	—	114
Latchford	8,934	1,407	—	10,341
Law	2,000	2,000	—	4,000
Lyell	—	—	\$ 18,904	18,904
Lyman	58	58	—	116
Murchison	123	123	—	246
Pedley	32	33	—	65
Poitras	45	45	—	90
Yates	3,000	3,000	—	6,000
	<u>\$ 14,312</u>	<u>\$ 6,787</u>	<u>\$ 18,904</u>	<u>\$ 40,003</u>
Parry Sound				
Harrison	\$ 75	\$ 75	—	\$ 150
Wallbridge	390	390	—	780
	<u>\$ 465</u>	<u>\$ 465</u>	<u>—</u>	<u>\$ 930</u>
Rainy River				
Bennett	\$ 43	\$ 43	—	\$ 86
Farrington	125	125	—	250
Fleming	166	167	—	333
Pratt	26	26	—	52
	<u>\$ 360</u>	<u>\$ 361</u>	<u>—</u>	<u>\$ 721</u>
Sudbury				
Awrey	\$ 576	\$ 576	—	\$ 1,152
Broder	320	320	—	640
Burwash	44	44	—	88
Cherriman	547	546	—	1,093
Cleland	371	371	—	742
Curtin	655	655	—	1,310
Dill	105	106	—	211
Dryden	814	814	—	1,628
Fairbank	42	42	—	84
Hawley	183	183	—	366
Hendrie	25	25	—	50
Janes	984	984	—	1,968
Louise	504	504	—	1,008
Mattagami	665	CR. 317	—	348
Mongowin	581	580	—	1,161
Morgan	230	230	—	460
Noble	665	CR. 317	—	348
Secord	1,615	1,616	—	3,231
Servos	510	510	—	1,020
Togo	665	CR. 317	—	348
Trill	85	85	—	170
Wisner	363	363	—	726
	<u>\$ 10,549</u>	<u>\$ 7,603</u>	<u>—</u>	<u>\$ 18,152</u>

Location and Name	Local Contributions Ordinary	Department Expenditure Ordinary	Department Expenditure Capital	Total Expendi- ture
Thunder Bay				
Blackwell	\$ 14	\$ 13	—	\$ 27
Conacher	12	13	—	25
Golding	12	12	—	24
Leduc	79	79	—	158
Pic	30	30	—	60
Sibley	5	6	—	11
	<u>\$ 152</u>	<u>\$ 153</u>	<u>—</u>	<u>\$ 305</u>
Timiskaming				
Alma	\$ 1,469	\$ 1,469	—	\$ 2,938
Auld	80	79	—	159
Barber	195	147	—	342
Cairo	1,469	1,469	—	2,938
Charters	45	CR. 69	—	CR. 24
Corkill	45	CR. 69	—	CR. 24
Firstbrook	71	71	—	142
Haultain	212	CR. 204	—	8
Hillary	122	122	—	244
Lawson	45	CR. 69	—	CR. 24
Leith	45	CR. 69	—	CR. 24
Lorrain	96	96	—	192
Marter	—	—	\$ 1,369	1,369
Nicol	130	CR. 124	—	6
Pense	—	—	965	965
	<u>\$ 4,024</u>	<u>\$ 2,849</u>	<u>\$ 2,334</u>	<u>\$ 9,207</u>
Total Road Expenditure for Settlers	<u>\$ 36,576</u>	<u>\$ 24,413</u>	<u>\$ 31,391</u>	<u>\$ 92,380</u>

APPENDIX No. 6

Unincorporated Townships Special Road Expenditure for Indian Reserves by Territorial Districts

(Part XII, The Highway Improvement Act)

April 1, 1968 to March 31, 1969

Location and Name	Indian Reserve Expenditure Ordinary	Department Expenditure Ordinary	Total Expenditure
Cochrane			
Moose Factory 68	\$ 926	\$ 926	\$ 1,852
Kenora			
Eagle Lake 27	\$ 359	\$ 359	\$ 718
Islington 29	1,816	1,816	3,632
Kenora 38B	2,563	1,293	3,856
Lac Seul 28	6,586	—	6,586
Rat Portage 38A	616	616	1,232
Shoal Lake 39A	2,843	2,843	5,686
Wabigoon Lake 27	152	152	304
Whitefish Bay 32A	4,740	4,740	9,480
Whitefish Bay 34A	250	250	500
	<u>\$ 19,925</u>	<u>\$ 12,069</u>	<u>\$ 31,994</u>
Parry Sound			
Dokis 9	\$ 13,973	\$ 2,196	\$ 16,169
Rainy River			
Big Island Mainland 93	\$ 47	\$ 47	\$ 94
Manitou Rapids 11	112	112	224
Rainy Lake 16A	104	104	208
Rainy Lake 17A	160	160	320
Rainy Lake 17B	5	6	11
Rainy Lake 18B	104	104	208
Rainy Lake 26A	114	114	228
Seine River 23A	194	194	388
	<u>\$ 840</u>	<u>\$ 841</u>	<u>\$ 1,681</u>
Total Road Expenditure for Indian Reserves	<u><u>\$ 35,664</u></u>	<u><u>\$ 16,032</u></u>	<u><u>\$ 51,696</u></u>

APPENDIX No. 7

Department Expenditures by Highways April 1, 1968 to March 31, 1969

Hwy No	Location	Mileage	Construction	Maintenance	Total
King's Highways					
2	Quebec Border—Windsor	426.8	\$ 5,326,912	\$ 1,762,999	\$ 7,089,911
2A	Hwy 401 (M.-C.F.)—Hwy 2 (Toronto)	1.3	46,375	15,195	61,570
2S	Brockville—Gananoque	24.5	14,939	116,262	131,201
3	Fort Erie—Windsor	239.6	2,014,591	903,179	2,917,770
3A	Hwy 58 (Welland)—Hwy 3	9.5	5,165	35,571	40,736
3C	Fort Erie—Ridgeway	6.8	1,412	27,966	29,378
4	Port Stanley—Flesherton	130.5	781,955	502,702	1,284,657
5	Toronto—Paris	54.7	145,849	353,199	499,048
6	Port Dover—Tobermory	201.3	1,876,779	747,046	2,623,825
7	Ottawa—Sarnia	446.9	4,986,336	1,865,612	6,851,948
7A	Hwy 115—Hwy 12 (Manchester)	30.7	583,814	120,482	704,296
8	Niagara Falls—Goderich [7]	97.8	8,338,057	502,229	8,840,286
8A	Queenston—St. Davids	2.4	25,745	15,151	40,896
9	Hwy 11—Kincardine	108.0	642,936	481,344	1,124,280
10	Port Credit—Owen Sound	88.7	1,968,029	783,860	2,751,889
11	Toronto—Rainy River	1197.4	7,690,203	3,497,108	11,187,311
11A	Port Arthur—Shabagua Cors.	20.5	244,973	60,982	305,955
12	Whitby—Midland [7]	69.7	46,047	385,530	431,577
14	Bloomfield—Marmora	41.2	77,765	144,781	222,456
15	Kingston—Ottawa [7]	71.9	56,498	248,199	304,697
16	Johnstown—Ottawa	49.2	425,589	153,573	579,162
17	Quebec Border—Manitoba Border [11]	1241.8	7,739,959	3,718,962	11,458,921
18	Leamington—Windsor	39.0	53,842	98,147	151,989
18A	Kingsville—Hwy 18	19.4	2,723	70,919	73,642
19	Port Burwell—Tralee	69.0	36,228	233,922	270,150
20	Niagara Falls—Hamilton	40.5	37,352	243,573	280,925
21	Hwy 3 (Morpeth)—Owen Sound	176.1	482,204	538,432	1,020,636
22	London—Hwy 7	27.5	1,269	71,067	72,336
23	Hwy 7—Hwy 9 (Teviotdale)	55.9	933,294	199,741	1,133,035
24	Port Dover—Collingwood	112.3	541,956	401,038	942,994
24A	Paris—Galt	14.4	104,810	72,420	177,230
25	Burlington—Hwy 24 (Ospringle Mills)	25.4	24,577	116,043	140,620
26	Barrie—Owen Sound	64.3	762,773	272,311	1,035,084
27	Toronto—Penetanguishene	87.7	17,777,341	1,026,055	18,803,396
28	Port Hope—Bancroft	81.9	823,041	314,716	1,137,757
29	Brockville—Arnprior [15]	51.8	15,846	129,358	145,204
30	Brighton—Havelock	29.5	725,902	440,088	1,165,990
31	Morrisburg—Ottawa	40.4	75,928	180,712	256,640
32	Gananoque—Hwy 15	11.3	6,320	46,236	52,556
33	Kingston—Stirling	73.3	75,978	264,709	340,687
34	Hwy 2 (Lancaster)—Hawkesbury	34.0	9,549	114,692	124,241
35	Newcastle—Dwight	121.0	1,787,976	404,542	2,192,518
35A	Fenelon Falls—Hwy 35	2.0	—	5,118	5,118
36	Burleigh Falls—Lindsay	44.3	6,137	104,771	110,908

Hwy No	Location	Mileage	Construction	Maintenance	Total
37	Belleville—Hwy 7 (Actinolite)	26.9	180,011	81,243	261,254
38	Kingston—Hwy 7 (N. of Sharbot Lake)	44.1	1,248,965	114,259	1,363,224
39	Hwy 2—Windsor	11.1	5,407	27,139	32,546
40	Chatham—Sarnia	45.8	253,652	116,430	370,082
41	Napanee—Pembroke	131.6	908,003	337,368	1,245,371
42	Brockville—Westport [29]	31.3	492,676	87,802	580,478
43	Alexandria—Perth	87.8	723,749	297,954	1,021,703
44	Hwy 17—Hwy 29 (Almonte)	8.6	2,016	18,842	20,858
45	Cobourg—Norwood	31.4	295,539	123,218	418,757
46	Hwy 7 (E. of Manilla)—Coboconk.	31.6	3,325	72,950	76,275
47	Hwy 7 (S. of Greenbank)— Hwy 48 (Ringwood)	17.8	12,457	149,566	162,023
48	Toronto—Hwy 46 (Bolsover) [12]	58.8	307,420	361,374	668,794
49	Pictou—Hwy 2 (W. of Deseronto) [2]	13.7	164,947	44,374	209,321
50	Toronto—Hwy 9 (N. of Palgrave)	18.5	19,897	121,427	141,324
52	Hwy 2 (W. of Duffs Cor.)— Wentworth City Line	15.4	2,901	73,859	76,760
53	Hamilton—Hwy 2 (Eastwood)	23.8	227,416	109,778	337,194
54	Cayuga—Cainsville.	24.7	681	121,856	122,537
56	Hwy 3 (Canfield)—Hwy 20 (E. of Elfrida)	14.6	1,704	68,052	69,756
57	Hwy 3A—Bismarck	8.9	2,248	34,129	36,377
58	Port Colborne—St. Catharines	18.4	642,766	91,820	734,586
59	Long Point—Hwy 3 (E. of Tillsonburg)	65.6	142,576	195,497	338,073
60	Hwy 17 (W. of Renfrew)—Huntsville.	146.8	1,127,705	368,692	1,496,397
61	International Border—Fort William	34.2	34,473	73,437	107,910
62	Hwy 14 (N. of Belleville)—Pembroke.	146.0	2,002,795	420,336	2,423,131
63	North Bay—Quebec Border	39.0	949,282	134,736	1,084,018
64	Sturgeon Falls—Hwy 11.	80.9	176,435	257,475	433,910
65	Quebec Border—Matachewan	79.4	150,493	218,457	368,950
66	Quebec Border—Hwy 65 (E. of Matachewan).	60.9	352,266	122,404	474,670
67	Hwy 101 (S. of Barbers Bay)— Iroquois Falls	22.0	423,240	54,304	477,544
68	South Baymouth—Hwy 17 (N. of Espanola)	78.9	278,831	214,134	492,965
69	Hwy 12 (N. of Brechin)—Capreol	197.7	1,106,042	572,055	1,678,097
70	Springmount—Hepworth	9.1	1,922	27,162	29,084
71	Fort Frances—Hwy 17 (E. of Kenora).	100.1	1,336,506	156,774	1,493,280
72	Hwy 17 (Dinorwic)—Sioux Lookout	42.2	894,083	72,640	966,723
73	Port Bruce—Dorchester	23.6	5,329	61,797	67,126
74	Hwy 3 (New Sarum)—Nilestown	13.2	30,767	44,821	75,588
76	Hwy 3 (Eagle)—Hwy 2	11.3	1,142	28,186	29,328
77	Leamington—Hwy 401 (N. of Comber)	14.1	2,684	33,585	36,269
78	Hwy 21 (Dresden)—Wallaceburg	9.5	1,061	17,451	18,512
79	Hwy 2 (Bothwell)—Hwy 7	29.8	8,917	75,936	84,853
80	Hwy 2 (S. of Glencoe)—Courtright	42.1	3,501	107,269	110,770
81	Delaware—Grand Bend	38.0	312,154	105,396	417,550

Hwy No	Location	Mileage	Construction	Maintenance	Total
82	Hwy 7 (Thedford)—Hwy 21	5.5	879	14,294	15,173
83	Russeldale—Hwy 21 (N. of Grand Bend)	24.1	8,731	63,552	72,283
84	Hensall—St. Joseph	10.7	1,621	29,960	31,581
85	Kitchener—Elmira	8.7	299	25,827	26,126
86	Guelph—Amberley	79.0	234,362	259,837	494,199
87	Harriston—Hwy 86 (Bluevale)	19.7	3,065	60,199	63,264
88	Bradford—Hwy 27 (Bond Head)	5.0	284	41,853	42,137
89	Hwy 400—Hwy 23 (E. of Palmerston)	63.7	185,737	209,211	394,948
90	Barrie—Angus	10.0	13,087	51,058	64,145
91	Stayner—Duntroon	5.0	3,585	16,729	20,314
92	Elmvale—Wasaga Beach	7.9	149	35,760	35,909
93	Hwy 11 (E. of Barrie)—Waverley	17.5	641	76,400	77,041
94	Callander—Hwy 17 (S. of North Bay)	5.8	14,800	23,035	37,835
95	Hornes Point—Wolfe Is.	7.1	1,055	30,705	31,760
96	Quebec Head—W. End of Wolfe Is.	22.9	6,571	64,297	70,868
97	Hwy 6 (Freelton)—Hickson	39.0	6,926	141,289	148,215
98	Blenheim—Windsor	53.3	71,754	166,579	238,333
99	Dundas—Hwy 24 (N. of Brantford)	15.9	40,336	69,165	109,501
101	Quebec Border—Hwy 17 (Wawa)	289.4	1,855,268	503,954	2,359,222
103	Port Severn—Hwy 69	29.9	3,257	93,337	96,594
104	Hwy 9—Grand Valley	1.8	213	6,652	6,865
105	Hwy 17—Red Lake	110.4	51,352	164,135	215,487
106	Hwy 28 (Dale)—Hwy 2 (Welcome)	2.6	—	10,057	10,057
107	Hwy 18—Hwy 3 (Ruthven)	1.0	—	2,085	2,085
108	Hwy 17—Hwy 639 (Quirke Lake)	26.0	395	61,682	62,077
112	Hwy 11—Hwy 66 (Swastika)	12.4	—	28,824	28,824
114	Hwy 3 (Maidstone)—Hwy 98	1.2	43	3,485	3,528
115	Newcastle—Peterborough [35]	17.1	3,090	74,220	77,310
116	Hwy 72 (Patricia)—Hudson	9.9	2,945	17,457	20,402
117	Metro N. Lts—Hwy 7	1.3	521	7,662	8,183
118	Dorset—Hwy 69	49.0	601,475	110,820	712,295
119	Hwy 17 (Dryden)—Richan.	13.9	8,981	35,738	44,719
121	Hwy 28—Hwy 35 (S. of Fenelon Falls)	81.8	42,215	219,650	261,865
122	Oakville—Q.E.W. (N. of Clarkson)	5.1	279,486	52,631	332,117
123	Hwy 11—North Bay Airport	4.5	32,226	17,392	49,618
124	Hwy 69 (N. of Parry Sound)—Sundridge	52.8	517,026	127,648	644,674
125	Hwy 105—Red Lake	8.4	16,822	12,566	29,388
126	Hwy 401—Hwy 2 (London)	3.2	2,826	23,078	25,904
127	Maynooth—Hwy 60 (E. of Whitney)	23.9	255,659	68,241	323,900
128	Kenora—Redditt	17.7	214,853	45,473	260,326
129	Thessalon—Chapleau	153.2	692,419	415,009	1,107,428
130	Port Arthur—Hwy 61	18.1	62,225	69,616	131,841
132	Renfrew—Hwy. 41	17.6	803	49,033	49,836
133	Hwy 33 (Millhaven)—Hwy 401	6.3	576	18,861	19,437
135	Hwy 401—Hwy 2 (London)	3.8	3,924	11,022	14,946
136	Hwy 24—Orangeville	7.3	1,165	38,722	39,887
137	Hwy 401—Thousand Island Bridge	1.9	—	13,724	13,724
138	Cornwall—Monkland	11.3	265,098	27,156	292,254
140	Hwy 3 (Port Colborne)—Hwy 20	—	123	—	123
144	Sudbury—Hwy 101	145.1	4,996,388	290,751	5,287,139
400	Toronto—Hwy 12 (Coldwater)	75.2	2,546,393	909,950	3,456,343
401	(M.-C.F.) Quebec Border—Windsor	537.4	20,560,438	4,874,376	25,434,814
402	Hwy 7—Blue Water Bridge	3.7	536,773	28,141	564,914
403	Burlington—Brantford	14.2	2,958,244	194,643	3,152,887
404	Toronto—Hwys 7 and 12	—	48,288	—	48,288
405	Q.E.W.—International Bridge (Queenston)	5.5	264,938	53,350	318,288
406	Hwy 58—Q.E.W.	3.2	3,204,202	15,779	3,219,981

Hwy No	Location	Mileage	Construction	Maintenance	Total
407	Hwys 35 and 115—Hwy 27	—	646,908	—	646,908
416	Johnstown—Ottawa	—	224,069	—	224,069
417	Quebec Border—County Rd. 9 (West of Ottawa)	—	3,430,025	—	3,430,025
427	Hwy 401—Steeles Ave.	—	1,402	—	1,402
Q.E.W.	Toronto—Fort Erie	95.6	16,508,461	2,064,252	18,572,713
Total Expenditure Allocated to King's Highways			\$143,598,265	\$ 39,747,448	\$183,345,713

Secondary Highways

500	Denbigh—Brancroft	38.6	\$ 329,122	\$ 110,198	\$ 439,320
501	Hwy 103—Honey Harbour	8.1	61,490	40,750	102,240
502	Napanee—Marysville	8.0	35,870	25,382	61,252
503	Tory Hill—Kirkfield	76.4	101,514	190,638	292,152
504	Hwy 620—Apsley	16.3	—	42,993	42,993
505	Hwy 46—Uphill	11.8	CR. 140	32,207	32,067
506	Plevna—Hwy 41	20.5	36,018	57,584	93,602
507	Hwy 28 (Lakefield)—Hwy 503	37.7	440,040	110,427	550,467
508	Burnstown—Black Donald Mines	20.7	13,943	158,211	172,154
509	Hwy 7—Snow Road Station	12.1	7,862	35,993	43,855
510	Magnetawan—Hwy 124	1.9	—	4,522	4,522
511	Brightside—Hwy 508	21.4	9,293	67,121	76,414
512	Eganville—Hwy 60	29.4	11,365	84,183	95,548
513	Hwy 132—East of Hyndford	9.8	—	34,047	34,047
514	Hwy 60—Interlaken	10.0	385	43,707	44,092
515	Hwy 512—Combermere	28.0	469,804	75,101	544,905
516	Port Sidney—Windermere	16.0	179,454	37,365	216,819
517	Twp. Rd. (near New Carlow)—Hwy 62	10.4	—	26,198	26,198
518	Sand Lake—Hwy 69	53.5	157,858	136,551	294,409
519	Hwy 121—Redstone Lake	33.4	365,475	84,963	450,438
520	Burk's Falls—Ardbeg	33.0	443,842	84,059	527,901
522	Hwy 11—West of Loring	48.9	197,409	132,194	329,603
523	Lyell Twp. Line—Hwy 60	13.5	283	46,336	46,619
524	Hwy 522—Hwy 534 (E. of Restoule)	3.1	67	10,426	10,493
525	Gravenhurst—Muskoka Lake	1.5	—	4,295	4,295
526	Hwy 69—West of Britt	2.3	2,483	7,511	9,994
527	Baysville—Huntsville	14.5	378	95,040	95,418
528	Wolsley Bay—Hwy 64	8.3	—	33,263	33,263
528A	Pine Cove Landing—Hwy 528	3.3	—	12,942	12,942
529	Hwy 69—Hwy 69 (Magnetawan R.)	15.7	—	69,168	69,168
529A	Hwy 529—Bayfield Wharf	3.0	5,972	9,796	15,768
530	Hwy 519—Hwy 35 (Carnarvon)	11.6	19,832	31,496	51,328
531	Bonfield—Hwy 17	2.3	—	9,676	9,676
532	Hwy 11 (S. of Bracebridge)—Hwy 69	40.0	197,249	93,887	291,136
533	Mattawa—Hwy 63	31.6	9,350	73,307	82,657
534	Powassan—Restoule	21.9	26,259	81,384	107,643
535	Hwy 64—Rivière Veuve	28.9	39,107	83,211	122,318
536	Hwy 17—Creighton	3.8	—	12,275	12,275
537	Hwy 69—Hwy 17 (Wahnapitae)	11.8	49,374	32,602	81,976
538	Algoma Mines Loop	4.1	—	10,957	10,957
539	Hwy 64—Warren	24.3	14,568	83,817	98,385
539A	Hwy 539—Tert. Rd. 805	0.8	—	2,725	2,725
540	Little Current—Meldrum Bay	86.6	194,830	281,334	476,164
540A	Hwy 540—Barrie Island	2.5	15,578	8,164	23,742
541	Sudbury—Skead	14.6	21,440	36,772	58,212
541A	Falconbridge—Hwy 541	1.9	—	4,507	4,507
542	Hwy 68—Gore Bay	44.6	80,292	131,526	211,818
542A	Hwy 542—Tehkummah	1.4	—	4,661	4,661
543	Long Lake—Sudbury	5.0	398,971	11,862	410,833
544	Levack—Hwy 144	1.7	1,015	3,084	4,099
545	Hwy 541—Milnet	16.5	13,761	40,330	54,091
546	Hwy 17—Mississagi Prov. Park	47.8	105,342	91,050	196,392
547	Hwy 101—Hawk Jct.	3.8	12,605	5,872	18,477

Hwy No	Location	Mileage	Construction	Maintenance	Total
548	Hilton Beach—Hwy 17	45.6	110,685	141,316	252,001
549	Lake Panache—Hwy 17	8.6	76,340	29,626	105,966
550	Sault Ste Marie—Gros Cap	6.5	69,072	18,852	87,924
551	Providence Bay—Hwy 540	11.6	261,460	34,345	295,805
552	Hwy 556—Twp. Rd. (E. of Hwy 17)	11.6	13,647	31,162	44,809
552A	Hwy 552—Hwy 17	1.0	—	2,727	2,727
553	Massey—Richie Falls Camp	48.7	641	115,534	116,175
554	Hwy 546—Hwy 129	10.9	—	23,576	23,576
555	Magog Lake—Hwy 557	7.0	410	18,706	19,116
556	Hwy 17 (Heyden)—Christina Mine Road	26.3	1,502	67,199	68,701
557	Blind River—Matinenda Lake	12.6	—	33,671	33,671
558	Haileybury—Montreal River	16.0	23,224	53,031	76,255
559	Hwy 69 (Nobel)—Hwy 69	13.0	182	53,983	54,165
560	Hwy 11—Hwy 144 (S. of Gogama)	121.3	169,554	310,067	479,621
560A	Westree—Hwy 560	6.2	—	14,415	14,415
561	Bruce Mines—Hwy 638	13.5	62,536	27,986	90,522
562	Hwy 11 (E. of Thornloe)—Hwy 65	9.0	985	27,076	28,061
563	Batchawana—Hwy 17	3.4	6,924	8,493	15,417
564	Blanche R. Br.—Hwy 112	9.8	33,699	22,585	56,284
565	Pte. aux Pins—Hwy 550	1.0	—	2,907	2,907
566	Matatchewan—Ashley Mine	16.4	3,692	30,542	34,234
567	E. of Silver Centre—N. Cobalt	21.8	42	56,861	56,903
568	Hwy 11—Kenogami	1.0	—	3,277	3,277
569	Hwy 11—Hwy 11 (S. of Englehart)	17.5	—	51,096	51,096
570	Sesekinika—Hwy 11	1.9	—	5,844	5,844
571	Hwy 562—Earlton	3.6	—	11,034	11,034
572	Hwy 11 (Ramore)—Hwy 101	10.3	1,665	20,036	21,701
573	Charlton—Hwy 11	12.0	16,510	36,497	53,007
574	Twp. Rd. (S. of Norembega)—Hwy 579	18.0	102,414	75,673	178,088
575	Hwy 101 (Night Hawk Centre) S'y	3.0	27	6,868	6,895
576	Hwy 101—Kam-Kotia Mine	15.5	24,160	23,375	47,535
577	Hwy 101—Iroquois Falls	15.6	80	48,428	48,508
578	Iroquois Falls—Hwy 11	5.1	1,381	14,080	15,461
579	Cochrane—Gardiner	21.8	—	64,776	64,776
580	Hwy 11—Lake Nipigon	7.7	—	11,540	11,540
581	Hwy 11—Remi Lake	3.3	15,150	8,690	23,840
582	Hurkett—Hwy 17	4.0	—	8,454	8,454
583	Mead—Lac Ste. Therese	30.1	28,583	130,961	159,544
584	Hardrock Mine—Nakina	42.3	7,368	74,094	81,462
584A	Hwy 11—Hwy 584	2.4	—	3,411	3,411
585	Hwy 11—Pine Portage	22.9	—	61,677	61,677
586	Hwy 11—Lower Shebandowan Lake	3.3	—	5,583	5,583
587	Silver Islet—Hwys 11 and 17	26.0	44,050	70,952	115,002
588	Stanley—Round Lake Road	34.8	17,009	108,984	125,993
589	Hwys 11A and 17A—Dog Lake Road	18.7	43,052	51,157	94,209
590	Hwy 130—Hwy 588 (Nolalu)	25.1	961	79,500	80,461
591	Hwy 589 Northerly	4.9	—	13,368	13,368
592	Hwy 11 (Novar)—Hwy 11	10.2	29,470	24,286	53,756
593	Hwy 61—Hwy 588 (Nolalu)	29.9	—	54,470	54,470
594	Dryden—Hwy 17	21.4	3,075	30,006	33,081
595	Hwy 597—Hwy 590	25.3	124,055	51,437	175,492
596	Kenora—N. of Minaki	29.6	5,701	117,339	123,040
597	Pardee—Hwy 608	9.5	1,002	32,503	33,505
598	Hwy 604—Hwy 128 (N. of Kenora)	2.7	40	5,578	5,618
599	Ignace—Tert. Rd. 808	187.4	48,186	245,025	293,211
600	Hwy 71—Rainy River	53.9	15,126	113,844	128,970
601	Hwy 17—Dryden	15.0	19,043	30,209	49,252
602	Fort Frances—Emo	29.1	56,764	99,640	156,404
603	Hwy 17—Dymont	2.8	382	5,629	6,011
604	Hwy 17—Kenora Airport	5.5	128	11,317	11,445
605	Hwy 17—Rugby Lake	7.7	—	22,827	22,827
606	Hwy 17—Markstay	1.0	—	4,455	4,455
607	Hwy 69 (Big Wood)—Hwy 64	5.9	456	22,481	22,937

Hwy No	Location	Mileage	Construction	Maintenance	Total
607A	French River—Hwy 607	1.5	—	5,095	5,095
608	Hwy 61—Hwy 595 (S. Gillies)	11.9	1,435	33,017	34,452
609	Hwy 105—Clay Lake	10.1	—	17,368	17,368
610	Hwy 67—Hwy 101 (Hoyle)	13.3	20,006	27,755	47,761
611	Hwy 602—Burriss/Miscampbell Twp. Line	12.5	cr. 1,755	24,487	22,732
612	Hwy 103 (Mactier)—Hwy 69	7.0	—	19,843	19,843
613	Hwy 602—Lake Despair	25.5	13,641	50,434	64,075
614	Hwy 17—Manitouwadge	36.4	1,053,548	97,447	1,150,995
615	Hwy 17—Buroitt Lake	13.6	7,947	37,977	45,924
616	Hwy 101—Palomar	2.0	—	3,863	3,863
617	Hwy 11 (Stratton)—Hwy 600	14.4	2,785	27,466	30,251
618	Red Lake—Madsen	7.3	—	10,875	10,875
619	Hwy 11 (Pinewood)—Hwy 621	25.3	6,602	40,194	46,796
620	Hwy 62—Hwy 28 (Apsley)	25.4	52,635	110,411	163,046
620A	Hwy 620—Hwy 28	0.3	—	723	723
621	Hwy 11—Lake of the Woods	40.0	17,849	51,956	69,805
622	Hwy 11 (Atikokan) Northerly	6.8	2,270	9,683	11,953
623	Hwy 11—Sapawe	3.1	151	4,879	5,030
624	Hwy 11—Larder Lake	26.3	278,694	56,816	335,510
625	Caramat—Hwy 11	20.0	505	44,041	44,546
626	Matheson—Porquis Jct.	19.7	4,674	46,193	50,867
627	Heron Bay—Hwy 17	5.2	442	12,162	12,604
628	Red Rock—Hwy 11 and 17	4.4	4,332	9,517	13,849
629	Timmins—Timmins Airport	6.7	71,936	15,341	87,277
630	Kiosk—Hwy 17	18.0	11,970	53,850	65,820
631	S. of Hornepayne—Hwy 11	71.0	1,605,535	119,522	1,725,057
632	Hwy 118—Rosseau	17.1	3,285	68,151	71,436
633	Hwy 11—Kawene	3.7	—	5,449	5,449
634	Val Caron—Hwy 144	11.2	46,942	26,571	73,513
635	Hwy 17—Ottawa River Bridge	1.6	—	4,796	4,796
636	Hwy 11—Frederick House	3.0	—	14,031	14,031
637	Hwy 69—Killarney	41.8	33,336	140,625	173,961
638	Dunns Valley—Echo Bay	23.9	22,970	121,172	144,142
639	Hwy 108—Hwy 546	14.3	—	46,696	46,696
640	Hwy 571—Earlton Airport Entrance	1.7	—	4,964	4,964
641	Hwy 17—Pellatt	8.4	5,482	34,254	39,736
642	Alcona—Sioux Lookout	11.3	9,303	19,916	29,219
643	Hwy 584—Twp. Rd. to Cavell	12.0	—	19,465	19,465
644	Hwy 69 (Pte. Au Baril) Easterly	0.6	—	1,870	1,870
645	Hwy 529—Bing Inlet	2.5	—	8,164	8,164
646	Pickle Crow—Central Patricia	6.7	—	7,179	7,179
647	Hwy 17—Blue Lake Prov. Park	5.5	25,946	9,483	35,429
648	Dyno Mine—W. Jct. Hwy 121	23.5	75	49,679	49,754
649	Bobcaygeon—Hwy 121	10.9	789	26,115	26,904
650	O.N.R. Right of Way—Hwy 112	4.7	1,052	10,350	11,402
651	Hwy 101—Missanabie	31.9	807,310	32,045	839,355
652	Wade Lake—Hwy 574	11.0	—	47,304	47,304
653	Portage Du Forte Br.—Hwy 17	5.5	80,326	17,132	97,458
654	Hwy 11—Nipissing	14.2	12,986	51,039	64,025
655	Timmins—Ward Kidd Twp. Bdry.	13.4	—	30,677	30,677
656	Hwy. 533 Northerly	2.6	34	2,807	2,841
657	Goldpines—Hwy 105	3.9	5,772	5,118	10,890
658	Hwy 17—Fairbank Prov. Park	12.2	28,487	35,175	63,662
659	Hwy 604—Hwy 128	12.3	14,167	25,316	39,483
660	Bala—Hwy 103	11.7	20,862	35,901	56,763
661	Gogama—Hwy 144	3.4	—	3,047	3,047
Total Expenditure Allocated to					
Secondary Highways			\$ 9,784,119	\$ 7,858,137	\$ 17,642,256

Hwy No.	Location	Mileage	Construction	Maintenance	Total
Tertiary Roads					
800	Hwy 11 and 17—Cheeseman Lake	71.0	\$ 9,411	\$ 37,742	\$ 47,153
801	Hwy 11—Namewanimikan River	8.8	23,149	3,383	26,532
802	Hwy 11—Burchell Lake	8.5	—	11,286	11,286
804	Hwy 105—Lower Manitou Falls	12.8	8,225	6,101	14,326
805	Hwy 539A (River Valley)—Pond Lake	35.0	10,561	35,813	46,374
806	Hwy 545—Sellwood	4.2	—	9,964	9,964
807	Smooth Rock Falls—Fraserdale	44.0	7,349	64,801	72,150
808	Hwy 646—Otoskwin River	36.0	6,084	5,645	11,729
Total Expenditure Allocated to Tertiary Roads			\$ 64,779	\$ 174,735	\$ 239,514
Access and Industrial Roads					
Algom—Nordic Mine Road			—	\$ 2,372	\$ 2,372
Caramat—Manitouwadge			—	16,228	16,228
Denison Mine Road			—	4,033	4,033
E. A. Wicks Road			—	7,859	7,859
Milliken Mine Road			—	7,117	7,117
Panel Mine Road			—	11,625	11,625
Stanrock Mine Road			—	21,351	21,351
Total Expenditure Allocated to Access and Industrial Roads			—	\$ 70,585	\$ 70,585
Unincorporated Township Roads					
Statute Labour Board			\$ 77,669	\$ 301,128	\$ 378,797
Local Road Board			613,624	822,652	1,436,276
Special—Settlers			31,391	24,413	55,804
Indian Reserves			—	16,032	16,032
Total Expenditure Allocated to Unincorporated Township Roads			\$ 722,684	\$ 1,164,225	\$ 1,886,909
Other Programs:					
Belfield Expressway (Metro Toronto)—			\$ 1,417,143	—	\$ 1,417,143
Brantford Expressway—			59,883	—	59,883
E. C. Row Expressway (Windsor)			569,396	—	569,396
International Airport Road (Metro Toronto)			10,652	\$ 17,055	27,707
Main Street East Tunnel (Welland)			359,154	—	359,154
Niagara Freeway			97,307	—	97,307
Queensway (Ottawa)			74,358	212,275	286,633
Rainbow Bridge Plaza (Niagara Falls)			28,003	—	28,003
Thorold Tunnel			2,460,242	—	2,460,242
Connecting Links			11,507,464	545,835	12,053,299
Development Roads			22,749,217	130,100	22,879,317
Ferries			36,672	930,116	966,788
Lands and Buildings			1,831,806	491,298	2,323,104
Miscellaneous Surveys			52,923	—	52,923
Sidewalks			73,838	—	73,838
Weigh Scales			10,585	16,418	27,003
Total Expenditure Allocated to Other Programs			\$ 41,338,643	\$ 2,343,097	\$ 43,681,740
Highway Totals			\$195,508,490	\$ 51,358,227	\$246,866,717
Sundry Unallocated, District Office, Administrative, Engineering, Building, Inventory Charges, etc.			1,549,827	12,276,491	13,826,318
Total Expenditures			\$197,058,317	\$ 63,634,718	\$260,693,035

[] indicates that two Highways share the same route; mileage is shown against bracketed Highway

APPENDIX No. 8

Counties

Chronological summary of road expenditure and Provincial subsidy

Year	Number of Counties	Approved Expenditure	Government
1903-1920	37	\$ 24,988,470	\$ 10,125,522
1921	37	11,078,288	5,119,882
1922	37	9,162,492	4,258,340
1923	37	7,403,510	3,418,523
1924	37	6,861,452	3,214,322
1925	37	6,608,431	3,222,678
1926	37	5,838,445	2,913,661
1927	37	7,424,465	3,706,720
1928	37	8,784,420	4,360,223
1929	37	9,212,758	4,591,110
1930	37	8,929,424	4,463,527
1931	37	7,265,351	3,625,861
1932	37	4,214,411	2,106,457
1933	37	3,058,623	1,529,228
1934	37	3,391,769	1,695,291
1935	37	3,107,215	1,553,273
1936	37	3,438,189	1,718,945
1937	37	4,062,753	2,031,373
1938	37	4,686,333	2,342,972
1939	37	4,775,109	2,387,241
1940	37	4,496,702	2,247,977
1941	37	4,805,302	2,402,651
1942	37	3,221,505	1,610,753
1943	37	3,951,745	1,975,873
1944	37	4,675,029	2,365,507
1945	37	5,692,080	2,898,136
1946	37	7,392,946	3,769,755
1947	37	9,597,751	5,064,601
1948	37	11,345,809	6,176,598
1949	37	12,645,251	6,949,736
1950	37	12,863,430	6,923,704
1951	37	15,136,060	8,058,376
1952	37	17,373,345	9,276,798
1953	37	16,404,875	8,822,597
1954	37	17,221,063	9,393,936
1955	37	19,193,908	10,304,708
1956	37	22,632,300	12,042,792
1957	37	25,310,514	13,832,164
1958	37	27,044,966	14,603,895
1959	37	31,478,081	17,094,521
1960	37	32,090,732	17,613,395
1961	37	31,210,823	17,179,416
1962	37	35,033,598	19,025,880
1963	37	36,470,287	19,784,038
1964	37	37,118,003	20,361,773
1965	37	42,002,955	23,261,397
1966	37	45,404,138	24,663,011
1967	37	51,057,147	28,019,302
1968	37	54,520,465	30,050,632
Totals to Date		<u>\$781,682,718</u>	<u>\$414,159,071</u>

APPENDIX No. 9

County Road Mileages and Expenditures

From inception of County Road Systems to December 31st, 1968

Provincial subsidies on 1968 expenditures being paid in the 1968-1969 fiscal year

County	Year of establishment of system	Road Mileages			Total approved expenditures to end of 1968	Total government grant
		County Roads	County Sub-urban	Total		
Brant	1917	72.0	65.4	137.4	\$ 12,984,104	\$ 7,129,500
Bruce	1917	295.8	—	295.8	18,247,818	9,815,461
Carleton	1910	166.2	141.0	307.2	36,485,102	19,159,330
Dufferin	1918	145.7	—	145.7	8,425,107	4,379,111
Elgin	1917	278.5	19.0	297.5	18,940,652	10,211,660
Essex	1916	155.1	117.9	273.0	29,604,615	15,483,350
Frontenac	1907	127.3	22.5	149.8	10,835,344	5,684,330
Grey	1918	349.6	24.7	374.3	20,865,522	10,909,850
Haldimand	1912	190.5	—	190.5	16,790,065	9,003,900
Haliburton	1968	4.4	—	4.4	14,000	7,000
Halton	1907	159.1	—	159.1	15,797,391	8,169,111
Hastings	1904	205.1	17.7	222.8	13,480,041	7,025,160
Huron	1917	332.6	—	332.6	21,411,583	11,615,590
Kent	1917	374.8	31.5	406.3	29,959,458	16,625,120
Lambton	1918	249.0	26.3	275.3	26,915,087	14,682,020
Lanark	1903	217.3	11.0	228.3	11,708,585	6,178,220
Leeds and Grenville	1910	309.1	32.9	342.0	16,516,737	8,385,260
Lennox and Addington	1906	154.2	—	154.2	9,970,467	5,173,470
Lincoln	1904	118.2	53.7	171.9	18,529,633	9,490,640
Middlesex	1906	322.0	70.6	392.6	37,642,734	20,788,630
Norfolk	1917	245.0	—	245.0	21,780,920	11,374,330
Northumberland and Durham	1918	331.9	14.0	345.9	21,785,891	11,528,310
Ontario	1918	247.5	42.4	289.9	23,350,927	12,481,880
Oxford	1904	218.9	15.6	234.5	20,346,358	10,792,360
Peel	1907	179.7	—	179.7	31,569,064	17,120,770
Perth	1907	181.1	28.6	209.7	13,122,853	6,879,440
Peterborough	1919	191.3	27.1	218.4	11,774,270	6,558,440
Prescott and Russell	1917	298.1	—	298.1	19,647,555	10,372,660
Prince Edward	1907	199.6	—	199.6	9,795,418	5,000,480
Renfrew	1918	216.0	—	216.0	15,702,978	8,272,470
Simcoe	1903	318.1	20.0	338.1	23,815,416	12,361,360
Stormont, Dundas and Glengarry	1917	335.8	61.0	396.8	22,575,419	11,915,360
Victoria	1917	192.8	—	192.8	12,919,219	6,919,880
Waterloo	1908	111.0	124.1	235.1	24,274,158	13,196,980
Welland	1912	107.5	51.4	158.9	26,164,616	13,679,980
Wellington	1903	278.4	37.9	316.3	24,182,642	12,828,140
Wentworth	1903	7.4	164.6	172.0	22,146,340	11,229,290
York	1911	7.3	204.2	211.5	61,604,629	31,729,900
Totals		7,893.9	1,425.1	9,319.0	\$781,682,718	\$414,159,070

APPENDIX No. 10

Incorporated Townships

Chronological summary of road expenditure and Provincial
subsidy including improvement districts and Indian reserves

Year	No. of townships	Approved expenditure	Subsidy
1920 to 1934	172-352	\$ 58,408,281	\$ 18,749,941
1935	353	2,945,424	1,233,807
1936	357	2,988,617	1,251,623
1937	358	3,857,519	1,943,345
1938	574	4,826,905	2,553,838
1939	583	5,392,982	2,865,752
1940	584	4,505,296	2,411,065
1941	584	5,452,287	2,917,817
1942	583	3,698,301	1,978,368
1943	584	5,512,991	2,929,508
1944	585	6,263,800	3,400,704
1945	596	7,696,534	4,177,609
1946	602	9,366,655	5,131,432
1947	604	12,562,799	7,064,223
1948	606	13,688,529	7,763,290
1949	609	15,262,451	8,658,126
1950	610	15,852,838	8,944,246
1951	610	18,774,705	10,544,324
1952	614	21,261,357	11,966,206
1953	615	20,448,783	11,477,684
1954	617	23,346,393	13,185,562
1955	619	27,026,147	15,376,232
1956	623	30,080,387	16,908,429
1957	624	33,147,637	18,530,212
1958	627	35,683,958	19,867,541
1959	626	41,789,335	23,376,726
1960	625	45,098,685	25,150,102
1961	632	44,505,542	24,919,087
1962	633	46,022,547	26,082,619
1963	634	51,317,254	29,923,461
1964	633	53,234,003	31,228,752
1965	633	57,009,416	33,473,942
1966	635	66,814,210	39,371,538
1967	633	73,703,160	43,207,686
1968	629	82,819,611	48,626,312
Totals		\$950,365,339	\$527,191,119

NOTE: 5 boroughs, 562 townships, 18 improvement districts and 44 Indian reserves are represented in the above expenditures for 1968.

APPENDIX No. 11

Cities, Towns and Villages

Chronological summary of road expenditures and Provincial subsidy

Year	No. of urban municipalities	Approved expenditure	Subsidy
1947	324	\$ 5,334,317	\$ 2,667,717
1948	327	5,614,301	2,807,717
1949	330	12,194,258	4,550,717
1950	331	12,834,507	4,823,507
1951	334	15,956,137	5,931,099
1952	333	15,898,103	5,946,000
1953	335	17,598,632	6,890,100
1954	336	18,223,848	7,021,700
1955	338	21,703,071	8,560,400
1956	339	24,456,353	9,612,100
1957	339	25,546,531	10,188,000
1958	340	30,231,141	11,723,500
1959	340	32,890,748	12,774,000
1960	341	36,899,762	14,506,000
1961	341	37,130,873	14,862,100
1962	345	40,193,137	15,903,500
1963	346	44,397,370	17,580,000
1964	346	51,665,358	20,535,500
1965	348	60,819,523	24,298,700
1966	346	71,813,234	28,350,600
1967	339	76,240,278	30,197,700
1968	340	89,175,733	34,957,500
Totals		\$746,817,215	\$294,689,200

NOTE: 33 cities, 6 separated towns, 146 towns and 155 villages are represented in the above expenditures for 1965.

APPENDIX No. 12

Summary of Expenditures on Urban Streets — 1968

Approved 1968 expenditures by cities, towns and villages under Part X of the Highway Improvement Act

Municipal Road District No.	Approved Expenditures—1968				Government Subsidy 33½%, 50%, 80%
	Cities (33) Sep. Towns (6)	Towns (146)	Villages (155)	Urban Total (340)	
1	\$ 4,442,910	\$ 949,494	\$ 346,152	\$ 5,738,556	\$ 2,253,231
2	4,529,400	595,106	304,074	5,428,580	2,062,065
3	5,353,416	1,370,939	275,414	6,999,769	2,646,477
4	12,850,582	4,670,534	367,511	17,888,627	6,989,233
5	923,121	2,102,519	283,387	3,309,027	1,524,457
6	2,335,104	5,272,159	544,999	8,152,262	3,777,622
6 MTA	12,980,718	—	—	12,980,718	4,326,906
7	1,746,246	902,924	193,359	2,842,529	1,141,954
8	1,795,244	104,753	170,034	2,070,031	740,011
9	10,742,781	1,644,907	362,294	12,749,982	4,655,573
10	—	—	60,840	60,840	32,709
11	—	293,617	58,480	352,097	179,064
13	753,900	292,605	29,090	1,075,595	412,703
14	—	787,721	2,500	790,221	398,333
16	—	824,241	—	824,241	427,836
17	2,768,282	799,094	—	3,567,376	1,386,352
18	2,055,517	34,918	7,865	2,098,300	1,098,942
19	1,339,650	29,933	—	1,369,583	461,462
20	—	877,399	—	877,399	443,052
Totals	<u>\$64,616,871</u>	<u>\$21,552,863</u>	<u>\$ 3,005,999</u>	<u>\$89,175,733</u>	<u>\$34,957,982</u>

**Summary
(Government su**

	Roads		Bridges and
	Construction	Maintenance	Construction
Brant	\$ 482,198	\$ 178,505	\$ 446,958
Bruce	523,272	243,032	212,517
Carleton	1,006,461	252,173	263,587
Carleton (Ottawa Suburb)	918,980	242,899	45,770
Dufferin	329,840	152,728	66,681
Elgin	743,854	245,662	490,428
Essex	1,022,898	404,209	99,190
Frontenac	553,480	137,653	151,199
Grey	488,201	400,844	224,627
Haldimand	596,037	160,695	50,091
Haliburton	14,000	—	—
Halton	1,241,845	245,550	159,149
Hastings	426,794	244,353	164,780
Huron	653,297	429,880	133,912
Kent	900,292	398,731	506,907
Lambton	1,181,276	402,767	162,860
Lanark	243,802	222,880	253,535
Leeds and Grenville	455,738	403,924	96,948
Lennox and Addington	215,434	139,612	41,193
Lincoln	621,748	262,676	81,001
Middlesex	1,058,522	462,566	831,690
Norfolk	943,139	410,468	193,655
Northumberland and Durham	1,336,771	264,159	200,065
Ontario	1,563,644	408,051	313,756
Oxford	544,455	334,234	206,906
Peel	2,033,377	364,530	919,812
Perth	420,443	310,520	162,389
Peterborough	420,733	229,388	369,293
Prescott and Russell	281,137	271,658	207,736
Prince Edward	176,534	200,970	55,895
Renfrew	458,766	250,702	111,398
Simcoe	1,096,769	443,211	277,646
Stormont, Dundas and Glengarry	614,970	366,367	133,481
Victoria	264,877	376,491	325,737
Waterloo	670,157	468,147	249,579
Welland	1,028,044	392,989	88,993
Wellington	602,855	359,049	138,460
Wentworth	551,806	355,750	166,254
York	2,522,093	431,615	171,292
Regional Municipality of Ottawa-Carleton	20,000	—	—
Total	\$29,228,539	\$11,869,638	\$ 8,775,370

Summary of

Metropolitan Toronto			
Roads	\$25,158,739	\$ 4,541,482	\$ 821,186
Subway	4,669,133	—	—
Total	\$29,827,872	\$ 4,541,482	\$ 821,186

Expenditures
(1969 fiscal year)

Approved Expenditure			Government subsidy
Construction	Maintenance	Total	50% and 80%
\$ 929,156	\$ 217,561	\$ 1,146,717	\$ 709,841
735,789	374,895	1,110,684	622,719
1,270,048	332,296	1,602,344	883,632
964,750	394,387	1,359,137	696,231
396,521	207,293	603,814	324,229
1,234,282	343,228	1,577,510	943,092
1,122,088	464,183	1,586,271	827,757
704,679	235,343	940,022	516,451
712,828	608,284	1,321,112	734,080
646,128	182,277	828,405	429,291
14,000	—	14,000	7,000
1,400,994	369,037	1,770,031	934,124
591,574	314,586	906,160	506,707
787,209	589,919	1,377,128	734,122
1,407,199	470,585	1,877,784	1,099,164
1,344,136	458,148	1,802,284	953,384
497,337	329,719	827,056	492,706
552,686	495,002	1,047,688	555,273
256,627	191,251	447,878	237,525
702,749	370,524	1,073,273	565,141
1,890,212	599,203	2,489,415	1,505,309
1,136,794	458,952	1,595,746	856,620
1,536,836	458,270	1,995,106	1,061,043
1,877,400	612,399	2,489,799	1,346,575
751,361	429,089	1,180,450	657,705
2,953,189	561,015	3,514,204	2,037,637
582,832	374,905	957,737	530,044
790,026	304,704	1,094,730	659,658
488,873	398,195	887,068	509,891
232,429	256,020	488,449	262,173
570,164	370,476	940,640	508,086
1,374,415	664,889	2,039,304	1,106,006
748,451	530,574	1,279,025	691,021
590,614	495,289	1,085,903	642,028
919,736	619,061	1,538,797	853,925
1,117,037	514,127	1,631,164	843,684
741,315	538,071	1,279,386	686,488
718,060	535,660	1,253,720	680,202
2,693,385	847,139	3,540,524	1,825,066
20,000	—	20,000	15,000
\$38,003,909	\$16,516,556	\$54,520,465	\$30,050,632

Expenditures — 1968

\$25,979,925	\$ 8,450,000	\$34,429,925	\$17,214,962
4,669,133	—	4,669,133	1,556,378
\$30,649,058	\$ 8,450,000	\$39,099,058	\$18,771,340

APPENDIX B.14

Mileage of Urban Road Surfaces at the End of 1968

Roads under Local Authority

Counties	Legally open	Earth graded and drained	Gravel or stone	Light bitu- minous	Asphalt concrete	Cement concrete	Other	Total
Brant	—	—	38.7	71.4	73.2	19.4	—	202.7
Bruce	9.8	9.9	48.0	59.1	28.5	—	—	155.3
Carleton	3.6	9.7	32.0	188.1	324.3	2.3	—	560.0
Chufferin	1.4	1.2	9.5	0.5	23.1	1.7	—	37.4
Elgin	12.1	1.2	19.2	52.6	43.4	1.1	1.1	130.7
Essex	13.3	24.4	81.5	91.7	196.5	299.9	4.1	711.4
Frontenac	0.3	0.7	—	15.4	78.8	0.3	—	95.5
Grey	0.5	27.3	33.7	71.5	30.5	2.3	—	165.8
Haldimand	14.9	3.7	23.5	22.4	18.5	—	—	83.0
Haliburton	—	—	—	—	—	—	—	—
Hatton	40.0	—	181.4	252.9	169.6	10.8	—	654.7
Hastings	0.5	4.1	20.3	94.5	25.6	3.8	—	148.8
Huron	2.7	0.9	50.6	38.6	30.4	—	—	123.2
Kent	6.1	6.0	33.7	32.1	152.2	4.0	—	234.1
Lambton	7.8	1.8	85.0	66.1	79.4	8.3	—	248.4
Lanark	28.1	0.3	25.1	25.3	38.6	0.8	—	118.2
Leeds and Grenville	4.5	2.2	20.6	35.1	62.0	5.4	—	129.8
Lennox and Addington	0.2	—	4.1	13.8	5.8	—	—	23.9
Lincoln	2.6	7.9	22.5	213.2	99.5	56.5	—	402.2
Middlesex	17.2	0.8	105.1	218.3	197.3	0.3	—	539.0
Norfolk	4.7	1.3	14.1	35.2	26.2	0.1	—	81.6
Northumberland and Durnam	7.4	2.5	45.8	82.3	65.7	5.1	—	208.8
Ontario	26.3	2.0	109.0	117.7	168.6	—	—	423.6
Oxford	5.3	0.1	39.8	73.8	44.2	2.8	—	166.0
Peel	10.7	14.8	61.7	160.4	239.8	—	—	487.4
Perth	10.8	1.3	53.4	53.9	49.9	0.7	—	170.0
Peterborough	8.3	0.5	30.9	79.2	74.4	2.3	—	195.6
Prescott and Russell	3.2	3.5	11.2	15.9	31.4	—	—	65.2
Prince Edward	—	—	2.2	6.3	12.7	0.2	—	21.4
Renfrew	1.6	4.7	46.1	46.5	69.8	—	—	168.7
Simcoe	18.1	18.1	86.3	132.6	140.7	6.5	—	402.3
Stormont, Dundas and Glengarry	2.2	—	29.4	44.6	22.6	50.8	17.9	167.5
Victoria	16.0	2.4	45.4	3.2	26.7	—	—	93.7
Waterloo	19.4	6.9	35.7	217.3	226.9	38.6	—	544.8
Welland	34.0	6.3	58.9	244.3	170.6	5.0	—	519.1
Wellington	14.0	3.2	61.4	98.7	115.3	2.7	—	295.3
Wentworth	7.9	—	11.7	139.8	404.5	1.6	—	565.5
York	1.2	2.9	14.1	51.4	76.9	—	—	146.5
Total Counties	356.7	172.6	1,591.6	3,165.7	3,644.1	533.3	23.1	9,487.1
Metro Toronto Area	3.1	—	4.4	6.5	496.9	5.4	2.6	518.9
Districts								
Algoma	37.1	4.9	143.5	13.2	112.0	0.3	0.1	311.1
Cochrane	33.4	7.7	62.0	26.6	15.6	—	—	145.3
Kenora	—	—	54.3	10.3	39.1	0.1	—	103.8
Manitoulin	3.3	2.8	14.8	1.5	—	—	—	22.4
Muskoka	23.9	0.4	38.4	25.5	17.9	—	—	106.1
Nipissing	10.1	1.6	97.2	61.2	89.7	—	—	259.8

APPENDIX No. 14 (Cont'd)

Counties	Earth graded Gravel Light Legally and or bitu- Asphalt Cement open drained stone minous concrete concrete Other							Total
Parry Sound.	29.2	0.2	33.4	2.8	16.4	—	—	82.0
Rainy River	—	1.1	33.2	12.2	16.9	0.2	0.4	64.0
Sudbury	14.7	4.1	58.6	78.6	155.1	0.4	—	311.5
Timiskaming	—	—	32.7	2.2	20.1	—	—	55.0
Thunder Bay	—	—	88.2	42.7	129.9	0.2	—	261.0
Total Districts	151.7	22.8	656.3	276.8	612.7	1.2	0.5	1,722.0
Grand Total	511.5	195.4	2,252.3	3,449.0	4,753.7	539.9	26.2	11,728.0

Mileage of Rural Roads

COUNTY ROADS

County	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cent con
Brant	—	—	16.8	100.9	19.7	—
Bruce	—	—	80.2	113.1	102.5	—
Carleton	—	—	33.7	71.6	201.9	—
Dufferin	—	—	89.5	8.2	48.0	—
Elgin	—	0.6	101.9	171.7	23.3	—
Essex	—	—	95.5	62.6	86.5	2.2
Frontenac	—	—	25.6	84.4	39.8	—
Grey	—	—	201.7	125.6	46.4	0.6
Haldimand	0.3	3.2	12.3	162.6	12.1	—
Haliburton	4.4	—	—	—	—	—
Halton	—	—	34.1	73.8	51.2	—
Hastings	—	—	133.9	76.0	10.8	2.1
Huron	—	—	160.6	79.3	92.7	—
Kent	—	0.2	25.3	13.3	352.3	6.6
Lambton	—	—	86.6	42.8	117.9	0.1
Lanark	—	—	105.8	122.5	—	—
Leeds and Grenville	—	—	130.0	152.9	59.1	—
Lennox and Addington	—	—	15.3	95.5	43.4	—
Lincoln	—	0.9	11.5	124.8	34.7	—
Middlesex	0.3	—	67.9	125.4	186.1	12.9
Norfolk	0.9	2.8	7.7	203.5	29.0	1.1
Northumberland and Durham	—	—	47.2	181.3	117.0	0.4
Ontario	—	—	52.5	83.4	154.0	—
Oxford	—	—	51.0	130.2	41.7	11.6
Peel	—	—	7.3	72.9	99.5	—
Perth	—	—	40.8	103.4	65.5	—
Peterborough	—	—	109.2	34.8	74.4	—
Prescott and Russell	—	—	79.7	120.7	97.7	—
Prince Edward	—	—	22.7	124.8	52.1	—
Renfrew	—	—	14.2	13.8	188.0	—
Simcoe	—	—	104.1	75.1	158.9	—
Stormont, Dundas and Glengarry	—	—	90.4	228.2	75.5	0.6
Victoria	—	—	100.8	49.9	42.1	—
Waterloo	—	—	29.6	89.0	115.0	1.5
Welland	2.5	—	4.9	115.0	36.5	—
Wellington	—	0.8	139.8	96.8	78.9	—
Wentworth	—	—	7.2	163.0	1.8	—
York	—	—	17.6	9.6	184.3	—
Total Counties	8.4	8.5	2,354.9	3,702.4	3,140.3	39.7

d of 1968

INCORPORATED — TOWNSHIP ROADS

	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete	Other	Total
.4	9.2	5.8	436.6	82.3	10.7	—	—	544.6
.8	74.4	78.8	1,619.4	73.3	11.4	—	—	1,857.3
.2	89.5	20.0	737.8	116.1	126.3	—	—	1,089.7
.7	50.5	39.5	732.8	8.0	1.8	—	—	832.6
.5	26.7	40.0	786.7	10.9	2.8	0.5	—	867.6
.0	8.6	15.0	711.5	133.9	23.4	2.2	11.5	906.1
.8	102.4	61.0	925.4	65.4	22.9	—	—	1,177.1
.3	141.8	97.6	1,896.4	42.4	7.9	0.6	—	2,186.7
.5	22.3	34.1	432.5	84.9	10.2	—	—	584.0
.4	40.8	27.2	487.4	72.8	1.7	—	—	629.9
.1	16.4	2.4	218.0	1.9	—	—	—	238.7
.8	198.6	111.5	1,443.2	43.6	12.6	—	—	1,814.5
.6	55.4	30.1	1,539.3	18.1	15.6	1.1	—	1,659.6
.3	5.5	17.9	1,158.0	3.0	25.9	0.4	7.5	1,218.2
.3	7.4	118.5	1,217.3	60.6	16.0	—	14.0	1,433.8
.0	101.0	41.2	830.2	43.8	20.6	—	—	1,036.8
.2	206.3	73.2	960.8	79.8	42.6	0.9	—	1,363.6
.9	103.9	80.8	563.8	40.8	4.9	—	—	794.2
.9	88.3	66.6	377.8	128.0	1.4	1.3	—	663.4
.6	60.5	23.2	1,559.6	24.6	19.5	0.3	—	1,687.7
.0	31.0	119.2	492.4	178.5	65.8	—	—	886.9
.9	464.8	286.6	1,669.6	186.5	35.6	0.4	—	2,643.5
.9	178.0	25.5	886.6	43.4	68.5	—	—	1,202.0
.5	16.2	1.2	947.6	10.5	55.2	—	—	1,030.7
.7	19.9	—	426.3	12.7	69.1	—	—	528.0
.7	16.3	10.2	992.9	7.1	0.7	—	—	1,027.2
.4	55.0	46.7	816.0	21.9	13.5	—	—	953.1
.1	86.9	206.5	701.3	19.1	4.3	—	—	1,018.1
.6	25.3	12.0	318.3	21.1	5.1	1.2	—	383.0
.0	130.0	117.5	1,413.9	43.7	41.6	—	—	1,746.7
.1	147.1	41.2	1,924.8	218.2	47.5	—	—	2,378.8
.8	83.3	84.5	1,113.9	52.1	55.2	—	—	1,389.0
.8	49.2	46.4	910.0	3.8	13.4	—	—	1,022.8
.1	19.7	2.9	474.0	76.0	9.3	1.4	0.3	583.6
.9	151.3	162.0	387.7	216.5	16.2	0.4	—	934.1
.3	49.5	66.3	1,027.6	97.1	12.9	0.1	—	1,253.5
.0	34.0	17.9	413.1	91.2	4.7	—	—	560.9
.5	61.5	4.9	725.8	66.8	147.5	—	—	1,006.5
.0	3,028.5	2,235.9	34,281.3	2,500.4	1,044.3	10.8	33.3	43,134.5

APPENDIX No. 15 (Cont'd)

Met

INCORPORATED — TOWNSHIP ROADS

	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Ceme concr
Metropolitan Toronto Area	2.1	—	1.2	3.8	341.4	21.2
Districts						
Algoma	—	—	—	—	—	—
Cochrane	—	—	—	—	—	—
Kenora	—	—	—	—	—	—
Manitoulin	—	—	—	—	—	—
Muskoka	—	—	—	—	—	—
Nipissing	—	—	—	—	—	—
Parry Sound	—	—	—	—	—	—
Rainy River	—	—	—	—	—	—
Sudbury	—	—	—	—	—	—
Timiskaming	—	—	—	—	—	—
Thunder Bay	—	—	—	—	—	—
Total Districts	—	—	—	—	—	—
Unorganized Townships	—	—	—	—	—	—
Grand Total	10.5	8.5	2,356.1	3,706.2	3,481.7	60.9

INCORPORATED — TOWNSHIP ROADS

	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete	Other	Total
9.7	55.9	49.4	61.0	438.1	1,338.4	5.8	—	1,948.6
	242.3	28.9	734.8	14.5	130.6	0.2	0.1	1,151.4
—	622.0	40.0	487.0	14.7	9.3	—	6.5	1,179.5
—	10.4	1.9	154.8	4.7	0.3	—	—	172.1
—	11.8	42.5	444.4	—	1.3	—	—	500.0
—	113.7	72.7	669.0	163.6	1.3	—	—	1,020.3
—	38.4	7.0	413.0	14.2	11.6	—	—	484.2
—	84.1	31.5	831.9	26.0	20.3	—	—	993.8
—	24.2	46.7	535.5	0.6	—	—	—	607.0
—	29.6	92.0	605.1	22.9	32.7	—	—	782.3
—	33.5	—	588.9	34.1	15.5	—	—	672.0
—	61.3	25.4	624.6	68.7	67.5	—	—	847.5
—	1,271.3	388.6	6,089.0	354.0	290.4	0.2	6.6	8,410.1
—	256.5	844.5	4,677.3	7.7	2.5	—	4.0	5,792.5
3.7	4,612.2	3,518.4	45,103.6	3,310.2	2,675.6	16.8	43.9	59,285.7

APPENDIX No. 16

Summary of King's Highway Mileage
By Highway District
As of March 31, 1969

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Chatham	78.6	513.9	19.8	9.7	622.0
London	51.7	538.6	17.2	—	607.5
Stratford	7.1	643.7	1.0	4.8	656.6
Hamilton	82.1	533.6	33.5	4.7	653.9
Owen Sound	15.6	549.8	18.8	28.1	612.3
Toronto	32.9	417.0	45.3	3.3	498.5
Port Hope	3.9	491.5	55.5	0.1	551.0
Kingston	63.4	554.4	105.7	12.7	736.2
Ottawa	59.5	567.6	50.3	2.6	680.0
Bancroft	—	131.7	183.3	54.1	369.1
Huntsville	—	290.7	90.5	20.6	401.8
North Bay	—	319.6	63.8	41.5	424.9
New Liskeard	—	276.2	138.0	97.7	511.9
Cochrane	—	314.7	7.1	29.2	351.0
Sudbury	—	308.7	7.3	90.5	406.5
Sault Ste Marie	—	397.3	131.3	80.8	609.4
Fort William	—	610.0	21.6	20.0	651.6
Kenora	—	499.8	55.2	50.1	605.1
Total	394.8	7,958.8	1,045.2	550.5	9,949.3

APPENDIX No. 17

Summary of Secondary Highway Mileage
By Highway District
As of March 31, 1969

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Owen Sound	—	0.4	0.2	7.5	8.1
Port Hope	—	12.3	44.4	27.4	84.1
Kingston	—	8.0	14.1	0.5	22.6
Ottawa	—	—	37.2	10.4	47.6
Bancroft	—	14.2	129.2	137.0	280.4
Huntsville	—	14.4	176.4	71.6	262.4
North Bay	—	8.0	105.2	104.0	217.2
New Liskeard	—	40.6	87.7	195.2	323.5
Cochrane	—	4.6	40.2	159.0	203.8
Sudbury	—	33.0	68.2	304.2	405.4
Sault Ste Marie	—	27.0	57.2	212.7	296.9
Fort William	—	14.1	36.5	442.2	492.8
Kenora	—	7.3	8.2	342.3	357.8
Total	—	183.9	804.7	2,014.0	3,002.6

APPENDIX No. 18

Summary of Tertiary Road Mileage
By Highway District
As of March 31, 1969

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
North Bay	—	—	—	35.0	35.0
Cochrane	—	—	—	44.0	44.0
Sudbury	—	4.2	—	—	4.2
Fort William	—	—	—	124.3	124.3
Kenora	—	—	—	12.8	12.8
Total	—	4.2	—	216.1	220.3

APPENDIX No. 19

Types of Surface on The King's Highways
As of March 31, 1969

County or District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Algoma	—	363.5	91.1	49.2	503.8
Brant	19.2	61.6	6.3	4.7	91.8
Bruce	4.8	120.2	18.8	18.6	162.4
Carleton	14.9	112.9	—	2.6	130.4
Cochrane	—	334.4	48.5	31.0	413.9
Dufferin	0.4	77.6	1.0	—	79.0
Elgin	36.3	108.1	—	—	144.4
Essex	15.0	171.5	19.8	—	206.3
Frontenac	4.3	123.9	41.6	6.9	176.7
Grey	4.7	148.9	—	9.5	163.1
Haldimand	—	71.6	2.3	—	73.9
Haliburton	—	52.4	57.3	1.2	110.9
Halton	15.2	90.1	—	—	105.3
Hastings	5.8	179.5	59.9	17.2	262.4
Huron	—	204.3	—	—	204.3
Kenora	—	410.3	37.9	50.1	498.3
Kent	43.1	174.7	—	3.8	221.6
Lambton	20.5	167.7	—	5.9	194.1
Lanark	—	100.7	9.4	—	110.1
Leeds Grenville	28.4	229.4	15.8	5.8	279.6
Lennox Addington	26.5	83.7	35.8	5.1	151.1
Lincoln	12.2	71.2	—	—	83.4
Manitoulin	—	25.8	—	28.8	54.6
Middlesex	15.2	208.5	—	—	223.7
Muskoka	—	157.8	32.1	6.6	196.5
Nipissing	—	229.9	80.2	42.4	352.5
Norfolk	—	79.3	17.2	—	96.5
Northumberland-Durham	—	257.2	12.5	0.1	269.8
Ontario	—	148.5	9.3	—	157.8
Oxford	4.5	139.6	—	—	144.1
Parry Sound	—	146.2	34.9	12.8	193.9
Peel	8.7	101.6	7.8	—	118.1
Perth	—	138.0	—	—	138.0
Peterborough	—	84.2	27.3	12.8	124.3
Prescott-Russell	—	59.0	—	—	59.0
Prince Edward	3.9	45.5	4.8	—	54.2
Rainy River	—	193.5	17.3	—	210.8
Renfrew	—	221.4	81.3	7.6	310.3
Simcoe	6.1	299.3	6.4	—	311.8
Stormont, Dundas and Glengarry	43.0	170.4	11.9	—	225.3
Sudbury	—	271.0	61.2	157.4	489.6
Thunder Bay	—	625.2	21.6	20.0	666.8
Timiskaming	—	170.2	91.3	42.3	303.8
Victoria	—	114.3	35.9	—	150.2
Waterloo	5.0	81.5	—	—	86.5
Welland	29.0	81.0	0.6	—	110.6
Wellington	10.4	164.8	—	4.8	180.0
Wentworth	—	126.9	24.3	—	151.2
York	17.7	159.8	21.8	3.3	202.6
Total	394.8	7,958.8	1,045.2	550.5	9,949.3

APPENDIX No. 20
Types of Surface on Secondary Highways
As of March 31, 1969

County or District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Algoma	—	21.8	39.5	311.9	373.2
Cochrane	—	33.5	51.9	108.5	193.9
Frontenac	—	—	15.8	19.3	35.1
Haliburton	—	6.1	63.2	27.5	96.8
Hastings	—	3.1	21.9	15.3	40.3
Kenora	—	7.3	8.2	164.8	180.3
Lanark	—	—	14.0	—	14.0
Lennox-Addington	—	5.5	7.0	—	12.5
Manitoulin	—	—	39.7	132.4	172.1
Muskoka	—	11.2	66.4	30.0	107.6
Nipissing	—	4.6	32.4	51.4	88.4
Ontario	—	—	—	1.9	1.9
Parry Sound	—	3.6	153.0	96.2	252.8
Peterborough	—	6.6	35.1	28.9	70.6
Rainy River	—	3.1	10.5	214.3	227.9
Renfrew	—	8.8	57.4	52.3	118.5
Sudbury	—	34.8	35.9	165.8	236.5
Thunder Bay	—	16.2	44.5	443.3	504.0
Timiskaming	—	11.7	76.0	125.1	212.8
Victoria	—	6.0	32.3	25.1	63.4
Total	—	183.9	804.7	2,014.0	3,002.6

APPENDIX No. 21
Types of Surface on Tertiary Roads
As of March 31, 1969

County or District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Cochrane	—	—	—	44.0	44.0
Kenora	—	—	—	12.8	12.8
Nipissing	—	—	—	35.0	35.0
Sudbury	—	4.2	—	—	4.2
Thunder Bay	—	—	—	124.3	124.3
Total	—	4.2	—	216.1	220.3

APPENDIX No. 22
Road Mileages in Ontario
As of March 31, 1969

	Concrete	High class bituminous	Low class bituminous	Gravel	Earth	Total
King's Highways	394.8	7,958.8	1,045.2	550.5	—	9,949.3
Secondary Highways	—	183.9	804.7	2,011.6	2.4	3,002.6
Tertiary Roads	—	4.2	—	216.1	—	220.3
Total	394.8	8,146.9	1,849.9	2,778.2	2.4	13,172.2

APPENDIX No. 23

Schedule of Controlled Access Roads

April 1, 1968 to March 31, 1969

Highway	Name or location	Designation by Ontario regulation number	Mileage
7	Madoc Bypass	129/68	0.38
28	Bewdley Bypass	432/68	4.00
43-31	Winchester Bypass	432/68	0.84
121	Highway 121 Diversion	145/68	0.10
402	London to Sarnia	432/68	28.60
Ottawa- Queensway	City of Ottawa	269/68	0.40
E.C. Row			
Expressway	Townships of Adelaide Plympton and Sarnia	432/68	10.00
402	London to Sarnia	80/69	10.80
Southwest			
Freeway (Ottawa)	Townships of Nepean and North Gower	80/69	19.00
Southwest			
Freeway (Ottawa)	Townships of Edwardsburgh Oxford & South Gower	80/69	27.00
Total Mileage			101.12

APPENDIX No. 24

Schedule of existing roads assumed as portions of the King's
Highway, Secondary Highway and Tertiary Road Systems for the fiscal year
ending March 31, 1969

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Miles
Albama	P-8149	43, 45 and 46	Nov. 28/68	651	14.690
Elgin	P-2040-33	City of St. Thomas	Nov. 25/68	4	0.130
Essex	P-4072-5	Chatham	Oct. 7/68	40	2.530
	P-4082	Raleigh	June 21/68	New	3.500
Hamilton	P-2726-26	Enniskillen	Jan. 14/69	21	0.230
	P-4073-10	Sombra	Oct. 2/68	40	5.900
London	P-1713-34	Town of Port Dover	Oct. 1/68	6 and 24	0.350
North York	P-2378-47	E. Zorra	Sept. 6/68	59	0.040
	P-3035-76	W. Oxford	Jan. 24/69	401	0.490
Simcoe	P-1426-66	Innisfil	Mar. 10/69	11	0.009
	P-1904-83	Nottawasaga	Sept. 13/68	26	2.270
	P-2082-32	Medonte	Mar. 13/69	12TC	0.320
Timiskaming	P-7193-2	S. Lorrain	June 21/68	567	1.630
York	P-1574-58	Etobicoke	Feb. 18/69	5	0.052

APPENDIX No. 25

**Schedule of designations and re-designations of sections of the King's Highway,
Secondary Highway and Tertiary Road Systems for the fiscal year ending
March 31, 1969**

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Miles
Algoma	P-2323-12	Kincaid and Kincaid			
		Location	Sept. 12/68	17TC	5.980
	P-2324-8	Rankin Location			
		(Salter's Survey)	Sept. 12/68	17TC	2.730
	P-2341-50	A. McDonnell			
		Location (Salter's			
		Survey	Sept. 12/68	17TC	2.840
	P-3383-7	29, Range 14	Sept. 12/68	17TC	4.770
Bruce	P-8140-3	24, Range 23	Jan. 23/69	651	5.900
	P-8148-1	43	Jan. 23/69	651	3.960
	P-8151-2	24, Range 24	Jan. 23/69	651	7.250
	P-2023-32	Kincardine	July 18/68	9	9.000
	P-2064-44	Hope	Oct. 3/68	28	7.600
Durham	P-2387-25	Cavan	Oct. 31/68	7A	5.600
Dundas	P-1769-19	Winchester	Aug. 22/68	31 and 43	0.840
Elgin	P-2389-17	Yarmouth and			
		S. Dorchester	Nov. 28/68	74	7.200
		City of Windsor	Oct. 10/68	3ECR	10.000
Essex	P-4084	Olden	Apr. 11/68	7TC	10.000
Frontenac	P-1877-39	Edwardsburgh,			
Grenville	P-6073	Oxford and			
		S. Gower	Jan. 2/69	416	0.270
		Esquesing	Sept. 26/68	7	0.500
Halton	P-1715-49	Unsurveyed			
		Territory	Apr. 4/68	17TC	5.880
	P-2325-61	Echo	Apr. 4/68	72	2.15
		Jaffray (Mun. of			
Kenora		Jaffray and			
		Mellick)	May 30/68	604	5.190
		Chatham	Nov. 28/68	78	6.000
Kent	P-2863-11	Sarnia	Oct. 3/68	402	7.000
Lambton	P-2311-92	Plympton and			
	P-2359-22	Warwick	Sept. 26/68	21	7.480
	P-2822-5	Warwick	Feb. 27/69	79	4.200
	P-4085	Plympton	Oct. 3/68	402	11.400
	P-4086	Warwick	Nov. 14/68	402	10.800
Lincoln	P-1799-37	Grainsborough	Jan. 9/69	20	10.000
	P-5044-14	Grantham and			
		Louth	Aug. 1/68	406	4.100
Middlesex	P-2403-10	N. Dorchester	June 27/68	73	5.270
	P-2456-44	Westminster and			
		N. Dorchester	July 4/68	74	5.630
Nipissing	P-4083	Adelaide	July 18/68	402	10.200
	P-2393-21	Strathcona	Nov. 28/68	11	0.500
	P-7116-4	Pentland	Oct. 10/68	630	2.060
Norfolk	P-1814-72	Middleton	June 20/68	3	2.900
Northumberland	P-2064-44	Hamilton	(See Durham County)		
Ottawa-Carleton	P-6074	N. Gower and			
		Nepean	Jan. 2/69	416	0.190

APPENDIX No. 25 (Cont'd)

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Miles
Peel	P-1659-101	Toronto	Feb. 6/69	10	8.330
	P-1801-186	Toronto	Feb. 6/69	5	5.200
	P-2093-81	Albion	Feb. 6/69	50	8.600
	P-2981-31	Caledon	Mar. 6/69	24	3.600
	P-3106-37	Toronto	May 2/68	122	1.000
Prince Edward	P-5047-14	Toronto	May 2/68	27 New	4.800
	P-1508-58	Ameliasburgh	May 23/68	14	2.300
	P-2200-42	Hillier	May 23/68	33	9.450
	P-3057-19	Nottawasaga	Feb. 6/69	91	5.000
	P-2370-33	Martland	June 13/68	64	5.210
Simcoe	P-7045-20	Cosby, Mason and Martland	June 13/68	64	7.820
Sudbury	P-7069-5	Denison	May 16/68	549	0.790
	P-7111-30	Balfour and Rayside	May 23/68	634	8.100
	P-7133-22	Blezard	May 23/68	634	3.040
	P-2268-24	McIntyre (Mun. of Shuniah)	May 9/68	17A and 11A	9.120
	P-2572-27	Neebing (Mun. of Neebing)	Jan. 16/69	61	4.700
Thunder Bay	P-8037-5	McIntyre (Mun. of Shuniah)	May 9/68	589	2.400
	P-8069-40	Neebing (Mun. of Neebing)	Sept. 19/68	Lakehead Expwy.	2.760
	P-8070-19	McIntyre (Mun. of Shuniah)	Sept. 19/68	Lakehead Expwy.	2.380
	P-8083-19	MacGregor (Mun. of Shuniah)	Sept. 19/68	Lakehead Expwy.	0.410
	P-7193-2	S. Lorrain	July 23/68	567	1.630
Timiskaming	P-2448-46	Bexley	May 2/68	46	2.600
Victoria	P-3517-7	Carden and Bexley	June 20/68	505	4.600
	P-5022-10	Digby	June 6/68	503	4.320
Waterloo	P-1776-28	N. Dumfries	May 2/68	24	3.200
Welland	P-1654-77	Bertie	Feb. 27/69	3	9.560
Wellington	P-4087	City of Guelph	Feb. 27/69	Hanlon Expwy.	6.400
York	P-2083-320	Etobicoke	Feb. 6/69	27	1.310
	P-5047-14	Etobicoke	(See Peel County)		
	P-5084	Vaughan	May 2/68	27 New	0.650

APPENDIX No. 26**Schedule of reversions and transfers of sections of the King's Highway and Secondary Highway Systems for the fiscal year ending March 31, 1969**

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Miles
Brant	P-2032-4	Oakland	Apr. 1/68	24	3.640
	P-2519-31	Brantford	Apr. 1/68	24	5.300
Cochrane	P-7178-9	Mountjoy	May 11/68	576	0.300
Durham	P-2550-21	Cartwright	June 29/68	7A	0.090
Grey	P-2812-27	Glenelg	May 25/68	4	0.450
Haliburton	P-2217-55	Dysart	May 4/68	121 and 519	0.270
	P-2789-24	Lutterworth	Oct. 19/68	35	0.300
Halton	P-1957-37	Nelson	Apr. 1/68	2	0.340
Hastings	P-1976-33	Tyendinaga	June 22/68	2	0.610
	P-2353-31	Village of Bancroft	Sept. 28/68	28	0.560
	P-2773-41	Village of Madoc	Jan. 2/69	62	0.380
Kent	P-2942-36	Zone	Sept. 28/68	79	0.057
Lennox and Addington	P-2150-42	Denbigh	Sept. 28/68	41	0.010
	P-2538-45	Town of Strathroy	Nov. 16/68	81	0.140
Middlesex	P-4009-29	City of London	July 13/68	126	0.620
	P-4009-30	Westminster	July 13/68	126	0.180
Muskoka	P-2605-60	Ridout	July 6/68	35	0.420
Nipissing	P-3441-6	Airy	July 20/68	127	3.300
Norfolk	P-2000-33	Town of Simcoe	Aug. 17/68	3	0.016
	P-4061-4	Town of Waterford	Dec. 14/68	24T	0.250
	P-4061-5	Townsend	Dec. 14/68	24T	2.200
Ontario	P-1811-28	Whitby	Dec. 21/68	2	1.030
	P-2798-15	Brock and Thorah	Apr. 1/68	48	10.420
	P-2800-49	Brock	Apr. 1/68	48	1.000
Parry Sound	P-3237-17	Chapman	Aug. 17/68	124	0.430
Perth	P-2006-56	City of Stratford	June 27/68	7	0.950
Peterborough	P-1902-25	Belmont	Apr. 1/68	7	1.200
	P-2757-16	Harvey	Sept. 21/68	28	0.750
	P-5027-6	Otonabee	Dec. 14/68	7B	0.350
Simcoe	P-1767-88	Orillia	Dec. 28/68	11	0.360
	P-1767-90	Orillia	Jan. 16/69	11	0.280
	P-1767-91	Orillia	Jan. 23/69	11	0.530
	P-1767-92	Orillia	Jan. 23/69	11	0.250
	P-2082-31	Medonte	June 27/68	12TC	0.260
Sudbury	P-2756-92	Innisfil	Feb. 6/69	400	0.840
	P-2148-44	McKim	Aug. 22/68	17TC	1.300
	P-2168-89	Dowling	Oct. 19/68	144	1.840
	P-7111-31	Rayside	Mar. 22/69	634	0.680
Victoria	P-3570-11	Laxton	Apr. 1/68	503	0.890
	P-5016-5	Ops	Sept. 21/68	35B	1.360
Welland	P-5029-14	Carden and Eldon	June 15/68	503	0.430
	P-1819-41	Thorold	June 1/68	20	0.076
	P-1819-44	Thorold	Sept. 21/68	20	0.500
Wellington	P-1907-28	Stamford	Nov. 9/68	8	0.600
	P-1903-22	City of Guelph	July 18/68	7	0.070
	P-1903-23	City of Guelph	July 18/68	7 and 86	1.430
York	P-1900-89	King and Whitchurch	Apr. 1/68	11	0.500
	P-2770-650	North York	Nov. 9/68	401	0.150
	P-2770-651	North York	Sept. 28/68	401	0.230
	P-2770-657	North York	Oct. 12/68	401	0.300
	P-2800-49	Georgina	(See Ontario County)		

APPENDIX No. 27

Ferry Services

Quinte					
Months	Days worked	Trips	Cars	Trucks	Total
April	17	593	4,078	131	4,209
May	31	1,308	9,100	331	9,431
June	30	1,301	11,264	316	11,580
July	31	1,410	17,390	330	17,720
August	31	1,397	16,568	372	16,940
September	30	1,345	14,091	570	14,661
October	31	1,327	11,039	409	11,448
November	25	996	5,172	203	5,375
December	—	—	—	—	—
January	—	—	—	—	—
February	—	—	—	—	—
March	4	117	1,218	45	1,263
Total	<u>230</u>	<u>9,794</u>	<u>89,920</u>	<u>2,707</u>	<u>92,627</u>

Peak Traffic—July 21, 1968

Trips — 59

Cars —917

Trucks — 4

Quinte Loyalist

Month	Days worked	Trips	Cars	Trucks	Total
April	30	1,131	10,683	526	11,209
May	29	913	7,751	362	8,113
June	30	980	10,514	412	10,926
July	31	1,057	17,692	407	18,099
August	31	1,032	16,927	681	17,608
September	15	504	5,740	248	5,988
October	21	649	5,669	232	5,901
November	30	977	6,556	376	6,932
December	31	1,257	8,910	385	9,295
January	31	1,235	7,606	365	7,971
February	24	1,109	8,267	370	8,637
March	29	1,162	9,752	395	10,147
Total	<u>336</u>	<u>12,006</u>	<u>116,067</u>	<u>4,759</u>	<u>120,826</u>

Peak Traffic—July 21, 1968

Trips — 44

Cars —951

Trucks — 2

APPENDIX No. 27 (Cont'd)

Wolfe Islander

Months	Days worked	Trips	Cars	Trucks	Total
April	18	279	4,855	282	5,137
May	28	437	8,330	475	8,805
June	30	484	9,910	573	10,483
July	31	496	12,146	583	12,729
August	31	497	12,256	586	12,842
September	30	483	9,805	697	10,502
October	31	493	9,039	682	9,721
November	30	478	7,627	544	8,171
December	31	478	8,090	399	8,489
January	31	497	9,085	475	9,560
February	28	445	7,226	438	7,664
March	31	495	9,227	460	9,687
Total	<u>350</u>	<u>5,562</u>	<u>107,596</u>	<u>6,194</u>	<u>113,790</u>

Peak Traffic—August 17, 1968.

Trips — 16

Cars —450

Trucks — 5

Upper Canada

Months	Days worked	Trips	Cars	Trucks	Total
April	29	395	6,634	228	6,862
May	25	292	4,877	148	5,025
June	30	346	6,373	145	6,518
July	31	361	7,751	121	7,872
August	31	365	7,803	111	7,914
September	30	376	6,647	129	6,776
October	31	387	6,250	161	6,411
November	30	378	5,528	114	5,642
December	21	239	2,736	65	2,801
January	—	—	—	—	—
February	—	—	—	—	—
March	—	—	—	—	—
Total	<u>258</u>	<u>3,139</u>	<u>54,599</u>	<u>1,222</u>	<u>55,821</u>

Peak Traffic—August 5, 1968

Trips — 13

Cars —287

Trucks — 1

CA20NHY
-A56

ANNUAL REPORT

for the fiscal year ending
March 31st

1970

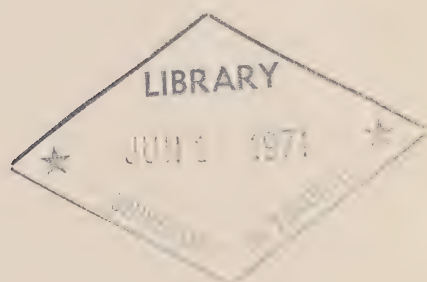
Department of Highways

ONTARIO

ANNUAL REPORT


for the fiscal year ending
March 31st

1970



Department of Highways
ONTARIO





*The modern highway is one of the
major lifelines of our society.
Supplying the need for more,
and for improved and safer
roads and highways is the
continuing challenge facing the
Ontario Department of Highways.*



*Hon. George E. Gomme,
Minister of Highways, Ontario*



THE MINISTER OF HIGHWAYS

TO THE HONOURABLE WILLIAM ROSS MACDONALD, P.C., C.D., Q.C., LL.D.
Lieutenant-Governor of the Province of Ontario.

AY IT PLEASE YOUR HONOUR:

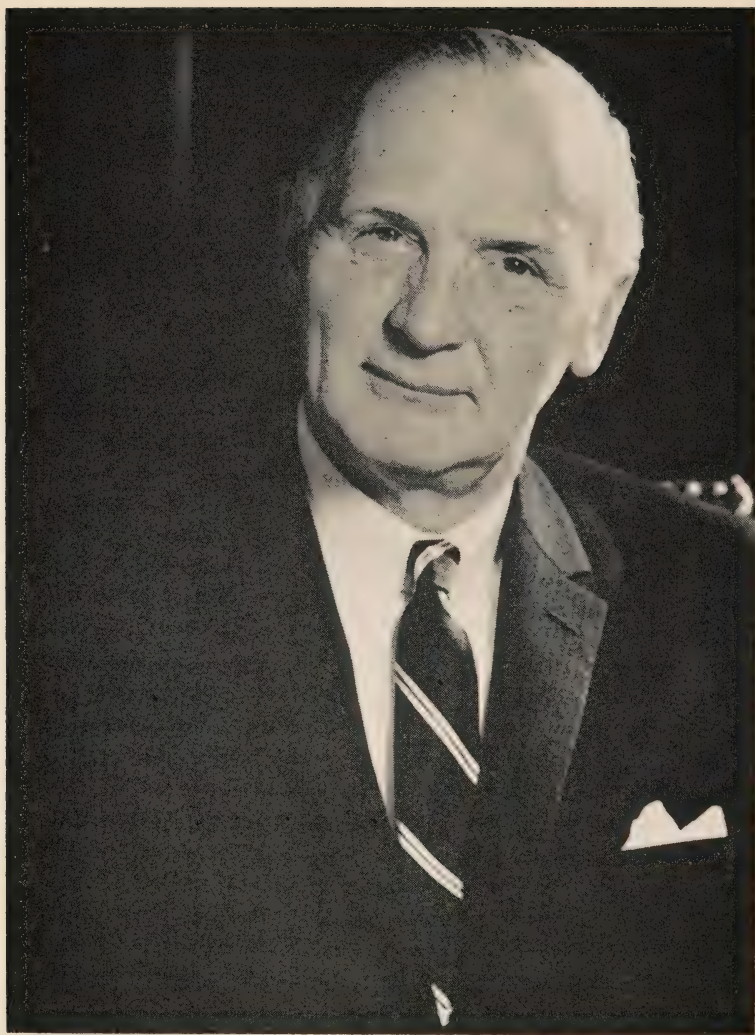
he undersigned takes pleasure in laying before you the
Annual Report of the Department of Highways, Ontario, for
the fiscal year ending March 31, 1970.

Respectfully submitted,

A handwritten signature in cursive script, reading "L. G. Homme".

Minister of Highways

Parliament Buildings,
Toronto, Ontario,
December 31, 1970.



*A. T. C. McNab,
Deputy Minister, Department of Highways, Ontario*



ONTARIO
OFFICE OF
DEPUTY MINISTER OF HIGHWAYS

TO THE HONOURABLE GEORGE E. GOMME,
Minister of Highways, Ontario.

Sir:

I have the honour to present the report of the
activities of the Department of Highways for the
fiscal year ending March 31, 1970.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "A. T. C. McNeil".

Deputy Minister

Downsview, Ontario,
December 30, 1970.

Table of Contents

ORGANIZATION	i
DHO ORGANIZATION CHART	i
FOREWORD	v
DEPUTY MINISTER'S SUMMARY	vii
ENGINEERING DIVISION	viii
Planning	ix
Design	x
Research	x
Operations	x
ADMINISTRATIVE DIVISION	xiii
Financial	xiii
Services	xiv
Electronic Computing	xv
PERSONNEL	xv
SPECIAL REPORTS	xv
HIGHWAY CONSTRUCTION 1969-70	xvi
APPENDICES	xviii

ORGANIZATION

The Ontario Department of Highways, with Headquarters at Downsview, administers five Regions embracing 18 Districts throughout the Province. Regional personnel are largely concerned with concepts and planning ; and those in Districts with actual construction and maintenance of highways.

Like other Departments of the Ontario Government, DHO is headed by a Minister of the Crown, who is an elected member of the Provincial Parliament. The Minister is advised on engineering and general policy matters by his Deputy Minister, a senior civil servant with the overall responsibility for the day-to-day operations of the Department.

The Deputy Minister is aided by two Assistant Deputy Ministers, one responsible for the Engineering Division and the other for the Administration Division. These Divisions include all but two of the Department's functions—Personnel and Legal, which are under the direct jurisdiction of the Deputy Minister.

Because of their many and diverse activities, Divisions are organized into Branches ; these, in turn, into Offices ; and Offices into Sections.

The following Offices report directly to the Assistant Deputy Minister (Engineering) : Claims (Contract), Estimating, Program, Resources and Access Roads. The Engineering Audit Office and the Information Section report directly to the Assistant Deputy Minister (Administration).

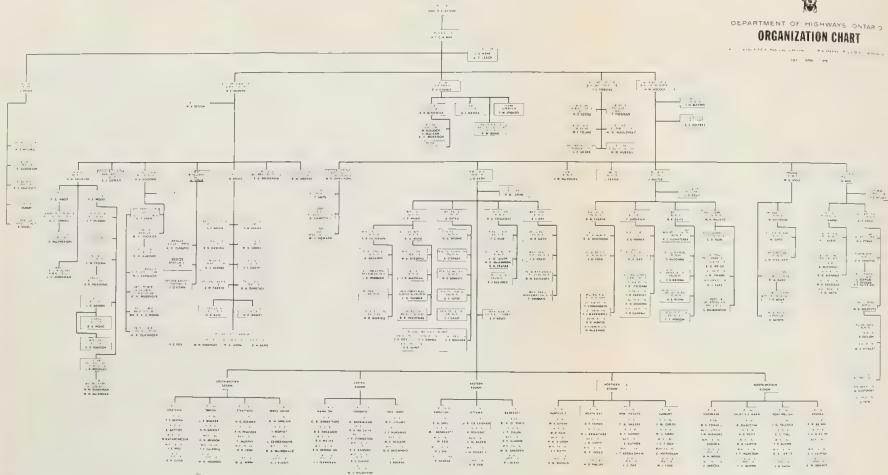


DEPARTMENT OF HIGHWAYS, ONTARIO

ORGANIZATION CHART

AS AT PRESENT (MAY 1960) (MAY 1960)

101 1000 100



DEPARTMENT OF HIGHWAYS, ONTARIO

Attempting annually to assess the performance of an organization so complex in character, widespread in activities, and so vital to the socio-economic life of the Province as the Ontario Department of Highways is one of those cases involving the interdependence of past and present. What DHO accomplished in the fiscal year 1969-70 cannot be isolated. It is rooted in the past; is the current contribution to the cumulative performance of the Department since its inception.

When the Ontario Department of Highways was established in 1915, Ontario was a largely agricultural region with a system of roads that had been designed primarily for the purpose of getting farm produce to market. The demands of the First World War of 1914-1918, and the concurrent increase in the use of motor vehicles, including their use for transporting war supplies, established the need for improving roads radiating from cities, towns and shipping points.

Recognition that the strategy of war was a problem involving roads led to the eventual undertaking of a highway improvement and construction program that was to be expanded after the war and become an integral and important factor in Ontario's general economic development.

It was the formation of DHO that set the stage; and when the first section of the Provincial highway system was taken over by the Department in 1917—a stretch of



DHO Headquarters at Downsview, on right, overlooking Highway 401 at the Keele Street Interchange, a hub of Metro Toronto traffic.

Highway 2 from the Rouge River to Port Hope—DHO, in co-operation with Municipal jurisdictions, was launched on a course that over the years has given Ontario a highway system second to none.

Where the First World War had pointed to the need for an industry-oriented approach to highway construction, the end of World War II in 1945 was another turning point, signalling, as it did, the beginning of a massive expansion program to meet the needs of the post-war economic boom.

Ontario had a registration of 662,719 motor vehicles in 1945; in 1969 the number was 2,953,789. That increase has been paralleled by the expansion of the Province's highway system—expansion in which the most modern in design, technology, materials and machines were combined in a campaign that has greatly changed the character of Ontario's highway system.

Building and maintaining such a system is an expensive proposition, as can be seen by the fact that the Department's expenditures for the fiscal year ending March 31, 1970, were \$454,647,508. But looking at the cost in terms of value received, and receivable, makes the investment eminently worthwhile.

Roads are built to handle traffic; and the cost of the roads, and their public value, increase in proportion to the volume of traffic over them. To attempt to place a figure on the value of Ontario's highway system would be extremely difficult, if not impossible. Some tangible evidence of the cost-value relationship could be presented by quoting statistics for a given period in a particular area, such as the tourist industry, but that would serve only to compound the obvious.

Building today for tomorrow—that would be a broad summary of current DHO activities building by actual construction, and by preparing through research and development to meet further the mass transportation needs of the Province's high-density population areas, the field in which GO Transit has been such a signal success.

Mass transit involves considerably more than moving people from place to place swiftly and efficiently. The environmental factor is a major consideration, and one to which DHO is giving due attention. Systems under study include any that might be adaptable to any interim mode, such as exclusive bus lanes or other forms of mass transit exclusive rights-of-way which DHO plans to include in all future freeway construction.

Whatever the mode or modes of mass transit selected, the decision will be the one calculated to best serve the people of Ontario. Based on the record, it will be another forward step in the Department's continuing pursuit of excellence.

DEPUTY MINISTER'S SUMMARY

Despite some delay in this year's construction schedule because of labour disputes and poor weather, the Department maintained work on Ontario's highways at a level comparable to the high volume of work carried out in other years.

As we embark on a new decade, it might be beneficial to pause and look back on the decade just ended, and we should not overlook the changes that have taken place in the field of transportation. The Sixties might, in fact, be called the beginning of a new era in transportation development.

The decade witnessed the mounting of a concerted effort to cope with transportation problems that have been developing with our increasing population and changing style of life. Out of this has come the accepted concept that modern transportation systems must be a balanced blend of public and private modes if the heavily-populated areas of our Province are to be properly served.

The Sixties also brought important developments in new equipment and there is every indication that this new decade will see further breakthroughs in the design and efficiency of equipment. DHO has been part of this new approach in shaping concepts to meet future transportation needs. What we have done, and will continue to do will doubtless play an important part in shaping transportation concepts for Canada as a whole.

Gross capital expenditure for the year was \$454,647,508, an increase of \$16,006,967 over the preceding year. Of the total, the amount provided to municipalities to assist in their road and street programs was \$175,562,921, a new record, and one reflecting our continuing recognition for the necessity of increasing municipal aid to cope with local transportation problems.

Following is a summary of expenditures as reported by the Financial Comptroller, with comparative figures for the preceding year:

	Fiscal Year Ending	
	March 31, 1970	March 31, 1969
Gross capital payments on construction of King's		
Highways and Secondary Highways—	\$199,915,087	\$192,003,567
Less: Recoveries on		
(1) Trans-Canada Highway		
(2) Ottawa-Queensway		
(3) Railway Bridges		
(4) City of Ottawa	5,558,602	6,357,214
Net capital payments on construction of King's		
Highways and Secondary Highways—	\$194,356,485	\$185,646,353
Ordinary expenditures on King's Highways and		
Secondary Highways including maintenance and		
general operating expenses	84,728,102	83,781,335
Provincial subsidies on municipal roads and		
streets, development roads, roads in unincorporated		
townships and connecting links	175,562,921	169,212,853
Total Net Expenditures	\$454,647,508	\$438,640,541

ENGINEERING DIVISION

The Assistant Deputy Minister (Engineering) is responsible for most of the engineering and other technical functions carried out by the four Branches of the Division—Planning, Design, Research, and Operations.



Airline passengers get bird's-eye view of construction at Highways 27 and 5 Interchange.

Planning Branch

The Planning Branch has two main components: the Traffic and Planning Studies Office, and the Functional Planning Office.

TRAFFIC AND PLANNING STUDIES OFFICE

PLANNING STUDIES SECTION

(A) Regional Transportation Planning

Highway Planning Studies have been carried out in most parts of the Province for the purpose of defining the provincial highway requirements over a 20-year planning period.

Final reports are now available for the following highway planning studies: Niagara Peninsula, London, Kingston, Eastern Ontario, Southwestern Ontario and Highway 17—Ottawa to North Bay. Reports are nearing completion for the Barrie-Simcoe County, Peterborough, Lake Huron-Georgian Bay and the Parry Sound-Muskoka areas. In addition, the following Regional Transportation Planning Studies are in progress: Sudbury-North Bay, Algoma, Thunder Bay, Kenora-Rainy River, Northeastern Ontario and the Kitchener-Waterloo Regional Transportation Study. The last study in this Province-wide series is the Madawaska Regional Transportation Study. Preliminary planning has been completed and field surveys were scheduled for the summer of 1970.

All recommended plans for transportation services are subject to review from time to time, as regional traffic growth and economic development indicate changes in trends.

(B) Urban Transportation Planning

The comprehensive approach to Urban Transportation Planning, initiated last year has been continued. This, in effect, has placed greater emphasis on public transportation as a component of the systems. The ability of the municipality to implement the recommendation is also carefully considered. The financial feasibility component of these studies results in a more realistic five-year construction program. More emphasis is placed on the fact that planning is a continuous process, and that planning of transportation is directly related to planning in other fields, such as land use, economics, public works, public financing, etc.

The TARMS (Toronto Area Regional Model Study) and the Kitchener Area Highway Study Models have been completed and are being used in the planning of systems in these areas. Several other regional models are expected to be developed in the next few years.

Better insight into environmental factors is being sought. This requires public involvement and participation, and promises to be a valuable component in the evaluation process, not only of systems but also of individual projects.

Seventeen urban transportation studies were completed during the year, bringing the total of completed studies to 70. Another 15 studies are in progress.

(C) Special Projects

1. *Land Use Model Development*

A major requirement for projecting future transportation demands in Ontario is estimation of future land use. In the past, these estimations were based on trend projections and the

judgment of planners, and done manually; but recent rapid growth have made it increasingly difficult to co-ordinate the planning and implementation of the required demands.

Development was undertaken within the Department of a land use model to overcome these difficulties and help to combine and illustrate proposals of various planning agencies and to more efficiently handle the large volumes of planning data available. Research was undertaken to evaluate various existing land use models in order to select the most effective. The general form of the model chosen was dubbed "GUD."

G is the growth of an activity in a zone

U is the available usable land for the activity

D is the attractiveness of the area for development of the activity

The model was to be applied initially to forecast population growth, and the attractiveness of areas was to be measured in terms of accessibility to employment and the availability of water and/or sewer services. A pilot study undertaken in the City of Hamilton, with the co-operation of the city's Planning Board, gave encouraging results in suburban areas with vacant available land for residential development. Research is continuing in an attempt to develop an accurate and workable model that will also include plans for urban renewal or redevelopment.

2. *Mass Transit Services*

The major undertaking during the year was a survey of travel patterns in the Lakeshore corridor, a survey designed to obtain information on the choice of mode when the travel time of competing modes (automobile and transit) are approximately the same. Information was obtained from more than 7,000 households within a ten-minute drive of Lakeshore GO Transit stations. The information was coded and transferred to magnetic tape and is now being analyzed. The results should provide a better understanding of the factors responsible for a person's choice of travel mode.

Since its formation in 1969 the Mass Transit Services Group has also been involved in its service function to the GO Transit Office. Various estimates of the potential patronage of future transit facilities have been prepared. Where possible, these projections will be checked against the patronage on the facilities, thereby providing a means of refining and improving the forecasting techniques.

TRAFFIC CONTROL SECTION

This Section underwent major changes in personnel and work programmes during the year, both at Head Office and in Regional Offices.

Events at Head Office included formation of a Traffic Control Research Group, with approval to organize and proceed with a Freeway Surveillance sub-group. The Traffic Control Research Group is also in the process of studying many long-standing traffic control problems and the effectiveness of new traffic control measures and devices.

The Traffic Counts Group, with responsibility for collecting inventory traffic data, was transferred to individual Regions at the end of the fiscal year. During the year the Group collected some 8,500 short traffic counts and maintained the operation of 42 permanent counting stations for the Department and ten for the Department of Transport.

The Origin-Destination Group collected data on traffic characteristics for one major area study and carried out several comprehensive urban studies. This group also surveyed several locations where regional planning studies are in progress.

CHARACTERISTICS SECTION

This Section of the Traffic and Planning Studies Office completed 1,300 requests for traffic data during the year, a slight decrease from the preceding year. The normal flow of incidental requests was answered; and, as in previous years, considerable amounts of

traffic data were made available from the volume files to consulting engineers, planners, university research groups and students.

The number of Permanent Count Stations remained at 42. Etobicoke and Kipling were still inoperative; and North Bay, Kitchener Rural, Kitchener Suburban and Kitchener Urban presented many technical difficulties which the field staff has been unable to correct. Further studies were made to reduce the number of Permanent Count Stations, and it's possible that the troublesome stations, along with some others, will be discontinued.

DHO, in co-operation with the Department of Transport, continued to maintain ten Permanent Count Stations in municipalities, but these are also being examined, with the possibility of eliminating some. The Department is also providing translation service to a few municipalities which furnish their own counting equipment and maintenance.

As of March 1, 1970, the individual Regions took over responsibility for the inventory counts in their areas, previously the responsibility of a separate group of fieldmen directed by the Head Office Traffic Control Engineer through the Traffic Control Supervisor.

The Accident Records Group received and coded 39,465 accident reports during the year and completed 732 requests for accident experience information, a marked increase over the preceding year.

The Origin-Destination Data Processing Group completed 48 studies during the year, eight of which provided 147,700 roadside interviews at 166 stations.

Highway Safety

The Department continued to co-operate with all concerned with highway safety. The Ontario Provincial Police were assisted in their "air patrols," which have contributed to a marked reduction in total motor vehicle accidents on highways under air surveillance. The operational administration of this program comes under the OPP Traffic Division, and DHO co-operates by measuring and marking those sections of highway having high accident rates.

DHO co-operated with the Department of Transport in conducting School Bus Safety Seminars throughout the Province for the information of school bus owners, operators, and education officials; and lectures were given at Ontario Teacher Preparation Courses in high school driver instruction conducted by the Ontario Motor League and the Department of Transport.

Traffic seminars were again conducted in various parts of the Province in co-operation with the OPP, and informal discussions with the OPP have resulted in studies being carried out on King's Highways at locations with abnormal accident rates or where certain driving hazards exist.

Ontario's Supervising Coroner forwarded inquest reports to the Department in cases where recommendations were made for certain improvements where fatal accidents occurred on King's Highways. The findings and recommendations were studied, and reports prepared by DHO Regional and District engineers, and the Supervising Coroner advised of action taken by the Department.

Other activities during the year included participation in safety conferences, seminars and courses conducted by the Canada Safety Council, the Ontario Traffic Conference, and the Automotive Transport Association.

COMPUTER LIAISON SECTION

This Section serves the whole Traffic and Planning Studies Office, both in an advisory capacity and in maintaining a control of the flow of work into and out of the Electronic Computing Branch.

A total of 2,600 production requests was recorded by the Section during the year, 1,942

for Planning Studies and 658 for traffic volume and accident data. Development requests totalled 32 and covered modifications to several programs of the Transportation Road and Transit packages to provide the output formats and added features requested by the user. The number of production requests handled for the Planning Studies Section was nearly triple that of the preceding year, and the number of traffic volume and accident data requests was slightly down.

Traffic Safety Group

The Group continued its research work in formulating a statistically sound method for identification of hazardous locations, and a report was produced to describe the method proposed. The accident report coding was updated to cover changes in the accident form introduced on July 1, 1969, and the accident coding manual was updated. Liaison was carried out with the Electronic Computing Branch to convert existing accident data and data programmes to the new coding format.

TRANSPORTATION SYSTEMS OFFICE

The newly created Transportation Systems Office began operation in July, 1969, as part of the Planning Branch. During the fiscal year it concentrated on planning GO Transit demonstration projects as an extension of the GO Lakeshore commuter rail service.

1. Express Bus Projects

Planning was undertaken to provide express bus service to Oshawa, Whitby and Ajax on the east, linking them with GO rail at Pickering and with the Toronto Union station. On the west, service was extended to Hamilton and Burlington, linking them with the GO station at Oakville and the Union Station. To the north, express buses linked the communities of Barrie, Newmarket, Aurora and Richmond Hill to Union Station.

2. Bay Ridges Dial-a-Bus Experiment

Planning was also undertaken for a demand actuated, or dial-a-bus service, for the residential community of Bay Ridges. It carries train passengers between their homes and the Pickering GO station.

FUNCTIONAL PLANNING OFFICE

Special investigation by this Office on highway projects are illustrated in this partial list of miscellaneous projects completed during the year:

Hwy. 5, Etobicoke Creek to Hwy. 10, lane widening; CAH 401, investigation of road test sites between Hwy. 6 and Metro; QEW, Hamilton west, report on median crossover closings; Hwy. 129, Thessalon to Chapleau, alignment grades; Ottawa-Queensway, median barrier requirements.

Also: design standards for—exit and entrance terminals on collector roads; transfer lanes; commercial access; merging of 4 lane divided highway to 2 lane undivided highway.

Production of the Functional Planning Office increased considerably this year, as shown by the table below.

Work Load	1968-69	1969-70
Functional reports completed	35	45
Functional reports reviewed	40	55
Grading work projects issued	64	126
Structure projects completed	71	96
Channelizations completed	68	105
Interchanges completed	22	32
	300	459

Projects issued during the year included the following major highway proposals :

- Hwy. 3, Leamington Diversion.
- CAH 416, 22 miles of the route from CAH 401 to Ottawa.
- CAH 417, 30 miles of the route from Ottawa to Quebec boundary.
- New Hwy., Bismarck to Canborough.
- Hwy. 2, Hamilton entrance bridges.
- CAH 404, Metro limits to Newmarket.

An urban expressway report, the Brady Expressway in Sudbury, was completed and issued, although it did not receive the approval of the Sudbury City Council.

Central Region Functional Planning

Reports completed during the year :

District 4

- Highway 2, Hamilton entrance bridges.
- Highway 3, Nelles Corners easterly to Highway 56.
- Highway 5, Trafalgar Road to Bronte Creek Bridge.
- Highway 5, Waterdown to Clappison's Corners.
- Highway 58, Niagara Street to Prince Charles Drive.
- Highway 97, Galt to Highway 6.
- Hwy 99, Copetown westerly.
- Highway 140 (interim), Port Colborne to East Main Street.
- New Highway, Bismarck to Canborough.

District 6

- Highway 2, Pickering to Whitby.
- Highway 7, from Highway 11 east to Warden Avenue.
- Highway 12, intersection improvement at Rossland Road, Whitby.
- Highway 27, from Rexdale Boulevard north to Highway 7.
- Highway 48, Ballantrae to Mt. Albert.
- Highway 401, Highway 2 to Brock Road, Pickering.
- Highway 401 to Highway 407.
- Highway 404, Part I (Metro limits to Newmarket).
- QEW, Highway 27 to Winston Churchill Boulevard.
- East Metro Freeway.

District 7

- Highway 7, from Norwood west limits westerly 9.1 miles ; from Norwood west limits easterly 1.2 miles ; Patrol Yard 1.0 miles east of Norwood.
- Highway 33, Glenora Ferry docks westerly to Picton East limits.
- Highway 36, Trent Canal Bridge at Bobcaygeon.

Southwestern Region Functional Planning

The following are the most noteworthy projects undertaken during the year :

- Highway 3, Leamington Diversion, 7.5 miles.
- Highway 18A, Kingsville westerly.
- Highway 87, Wroxeter to Bluevale.
- Bloomfield Road access to Chatham from Highway 401.

Eastern Region Functional Planning

Four Functional Reports and 20 major grading work projects by the plan and profile method were completed and issued during the year, an increase of ten issued projects over the preceding year.

Completed projects included :

- Four projects on the two-lane phase of Highway 416 with a total of 22 miles. This means that the Functional Planning work for half the length of the rural section of the proposed freeway has been completed from Highway 401 to the Rideau River.

—Two projects on the two-lane phase of the proposed freeway new Highway 17 from Arnprior westerly for nine miles.

—Four projects on Highway 17 with a total of 30 miles.

This means that about 60 per cent of the length of the rural section of this proposed freeway has had its functional planning work completed.

Preparatory work was also carried out during the year on a Functional Report for Highway 416 from Highway 401 to the Rideau River, and work was performed on individual projects within these limits that were issued by the plan and profile method. This Functional Report was expected to be completed in 1971.

Detailed studies were carried out on the proposed freeway new Highway 17 (417), more specifically from Regional Road 9 (Kanata), west of Ottawa, to Haley Station. The portion of this freeway from Haley Station to the north limits of the Region is being studied by the Functional Planning Northern Region. A preliminary presentation of the corridor concept was made to senior Department officials and was approved except for the section bypassing the Town of Renfrew.

Planning for the remaining 22 miles of Highway 17 (east of Ottawa) was 75 per cent completed at the end of the fiscal year. Functional planning for the rural section of the entire freeway is thus expected to be completed in 1971. The basic scheme for the urban section of this freeway has been developed and was to be presented to the Ottawa Freeway Technical Advisory Committee for approval early in the new fiscal year.

Among other activities, this Region has participated and taken a leading role in the Technical Advisory Committees for the following urban expressways:

—Concession Street Expressway, City of Kingston.

—Highways 416 and 417, City of Ottawa.

—New Highway 17, Town of Pembroke.

The following projects were completed by consultants during the fiscal year:

—Highway 33, Frankford northerly—Functional Report.

—Highway 62, 4.0 miles north of Killaloe Station northerly—Plans and Profiles and D.C. report.

Northern Region Functional Planning

The following projects were completed during the fiscal year:

—Highway 35, 0.2 miles N. of north Junction Highway 121 northerly.

—Highway 118, Muskoka River, Baysville, easterly.

—Highway 632, Junction Highway 118 northerly.

Two projects are currently under study on Highway 101, 31.8 miles and 40.0 miles west of Secondary Highway 576 westerly.

The above does not include the Brady Street Expressway, Sudbury, which was completed during the year under the direction of a City/Department Technical Advisory Committee.

Another major project completed was Highway 11, Gravenhurst northerly, which extended four-lane divided development of Highway 11 northerly to south of Brace-bridge. Similar projects are currently under study for other major arterial corridors within the Region.

Design Branch

The Design Branch designs all highways and structures and supervises all pre-engineering. It includes a large Bridge Office, and Offices concerned with Road Design, Engineering Surveys, and Photogrammetry.

ROAD DESIGN OFFICE

The Road Design Office completed design drawings and contract documents during the year and prepared quantity estimates for 236 projects covering more than 1,000 miles of Highway construction and reconstruction. A summary follows:

Resurfacing.	49.0 Miles
Asphalt Resurfacing	92.4 Miles
Grading and Drainage.	20.2 Miles
Grading, Drainage and Granular Base.	104.7 Miles
Grading, Drainage, Granular Base and Hot Mix Paving	287.1 Miles
Grading, Drainage, Granular Base and Concrete Paving.	81.0 Miles
Hot Mix Paving	393.4 Miles
Clearing, Grubbing and Fencing.	104.0 Miles
Prime and Double Surface Treatment.	32.2 Miles
Structure and Approaches	4.7 Miles
	17 Projects
Miscellaneous.	36 Projects

Designs were also completed and contract documents, drawings and estimates prepared for 17 structure and approach contracts and 36 miscellaneous projects for the erection of overhead sign supports and highway illumination.

HEAD OFFICE

Road Design Head Office is responsible for the following centralized operations:

DESIGN SERVICES ENGINEER'S SECTION

The **Intersection Detail Design Group** attached to this Section completed the detail design of 29 channelizations during the year, and nine interchanges, and completed four intersection improvements.

The **Geometric Design Group** completed the detail design of six interchanges and two channelizations; completed revisions in the vertical and horizontal alignments of several projects to improve existing conditions; completed geometric layout plans and co-ordinate control systems for two projects; reviewed several expressway designs; and developed a series of programs for electrical calculator.

PROJECT DESIGN ENGINEER'S SECTION

The **Project Review Group** of this Section, with responsibility for reviewing all projects submitted by the Regions for accuracy and conformity to current policy, during the year examined 236 projects representing more than 1,100 miles of highway construction.

Another group, **Highway Standards**, is responsible for the preparation of all Department standards for inclusion in projects.

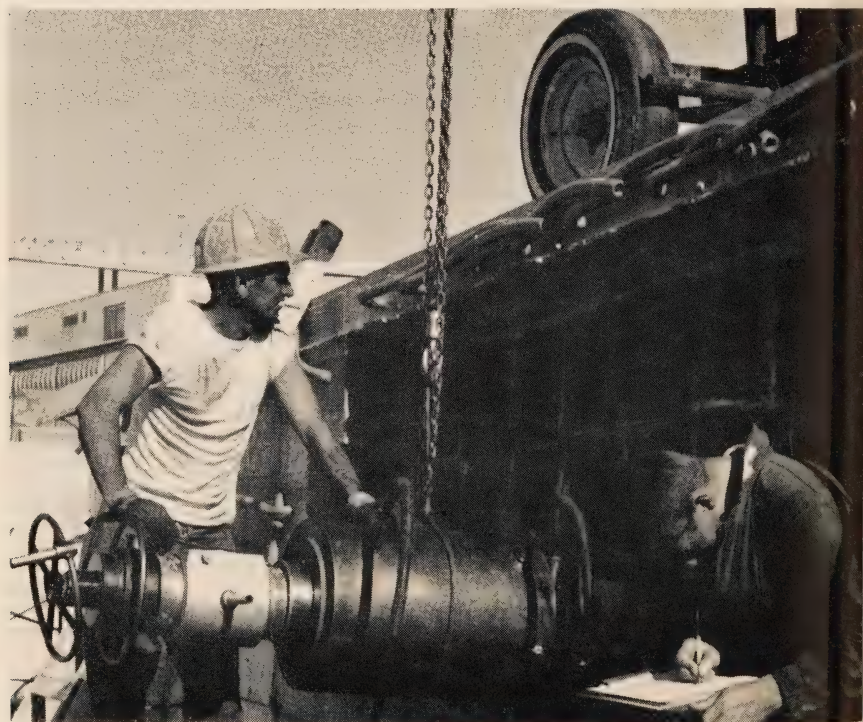
DESIGN STUDIES ENGINEER'S SECTION

During the year the first phase of a highly sophisticated highway design computer program package was completed, a system that will eventually enable computer processing of all types of rural highways and expressways. A program dealing with the geometrics in designing interchanges, with a multitude of interconnecting highways, loops and ramps is also nearing completion.

These programs were initiated to fully utilize the much greater capacity of the 360/65 model computer systems as compared to the 7044 model computer and its program package.

BRIDGE OFFICE

This Office, under the direction of the Bridge Engineer, is divided into four Sections: Bridge Design, Bridge Control, Municipal Bridges, and Planning.



Engineering data on modern highway construction is recorded as seated technician notes results of bridge stressing operation at the new interchange of Highways 5 and 27.

BRIDGE DESIGN SECTION

Current Design—Two major highway improvements along the Q.E.W. are currently in the design stage—the Grimsby-Diamond Interchange, and the Toronto Entrance. Designs

of a few of the 16 structures required have been completed and the remainder will be completed in the coming year. Among the Q.E.W.-Toronto Entrance bridges, the CNR Overhead is unusual in that the structure is to carry eight lanes, plus shoulders over seven railway tracks at a very sharp skew angle on curved alignment. Models were built to help in selecting the most suitable type of structure, based on economics, construction and appearance.

Design of bridges was started on the E. C. Rowe Expressway. The largest project completed during the year for this expressway was the Grand Marais Drain Diversion structures. This project is large both in terms of estimated cost of construction—\$950,000—and length.

Continued Design—Design work on Highway 417 between Ottawa and the Quebec border is continuing. These structures are being designed to increase safety for motorists by either eliminating the shoulder piers altogether, or by locating them far enough from the roadway to avoid the use of steel beam guiderails. Where shoulder piers have been eliminated, the toes of slopes at the abutments are flattened and contoured to improve highway safety.

Completed Design—Design of the Blanche River Bridge and Control Dam was completed during the year and design work was completed for all bridges in the Q.E.W. and Highway 20 Interchange. An interesting feature of this interchange is the design of the longest (1,998') prestressed, post-tensioned bridge in the Province, a structure that has no formal provision for longitudinal expansion. Since the structure is located within a series of spirals and horizontal curves, producing a fairly sharp curved bridge on plan view, the longitudinal expansion is taken up transversely across the numerous piers. This transverse movement will be in the order of 6" maximum.

In all, 91 structures to a value of \$17,298,000 were designed during the year.

BRIDGE CONTROL SECTION

Section engineers continued to assist District field staff on all phases of bridge construction. Technicians provided quality control inspection on all pre-cast prestressed beams manufactured for the Department, as well as for a large number of municipal contracts. Lectures were given at the DHO training school on all phases of bridge construction, and the staff participated in several construction seminars at District Offices.

During the year this Section handled nine structural steel contracts involving a total of 878 tons of steel. Arrangements were also made for shop and field inspection by independent inspectors; and for the first time, DHO personnel carried out a portion (507.5 tons, four contracts) of the field inspection services required.

MUNICIPAL BRIDGE SECTION

All municipal structures subsidized by DHO are reviewed by this Section to ensure public safety, reduce costs, and increase the life of structures by recommending improvements in design. This assures the Department of good dollar value for subsidies; and municipalities too small to maintain engineering departments benefit from computer analysis of deck designs and from the Department's engineering experience.

Bridge Hydrology—The hydrology group continued to provide specialized service on hydraulic problems to various areas of the Department and to other agencies. River crossing investigations during the year increased in complexity, mainly as a result of freeway construction in urban areas and urban drainage projects. Major recurrent flooding problems dealt with included those at Cobb Lake, near Ottawa, and on Highway 31 at the South Nation River near Winchester. Of the many washouts investigated, the worst were north of Sault Ste. Marie, where damage to roads and structures was heavy.

A three-month training program in the hydrology and hydraulics of bridges and large

culverts was instituted in 1969. The Bridge Planning Section hopes to achieve maximum benefits from this program with the cooperation of the recently-formed Staff Development Section.

ENGINEERING SURVEYS OFFICE

This Office is responsible for all survey work and the preparation of many types of engineering drawings relative to planning and design requirements; the surveying, compilation, processing and distribution of Vertical and Horizontal Control; the preparation and distribution of Strip Plans, and the training of personnel within the Office.

This year the five Regional groups attached to this Office ran some 1,500 miles of surveys and prepared and processed an equal amount of plans. In addition, 770 miles of cross section were taken, of which 425 were originals, 170 were preliminary, and 175 for resurfacing. The following special surveys were run and plans prepared: 110 Bridge Site plans, 43 Railway Crossing plans, ten Energy Board plans, 15 Patrol Yard plans, and ten Commuter Station sites.

PHOTOGRAMMETRY OFFICE

With the acquisition of an Automatic Drafting Machine system, the past year saw the transition of this Office from a drafting-oriented operation to a precision computer graphic function. This system consists of the Gerber 1232 automatic light beam drafting machine, the Hewitt-Packard 2116B computer, a magnetic tape reader and an ASR 33 teletype.

The system receives information directly onto magnetic tape from the stereo model in the Zeiss Planimats. The tapes are used initially on the ADM to produce the required plan at the scale and content dictated by the user; and the potential exists of placing this tape on another computer as the digital terrain model for that segment of a highway.

HEAD OFFICE AND REGIONAL SECTIONS (Interpretation and Studies)

These Sections have the responsibility of preparing, through photographic interpretation techniques, area studies, drainage and hydrology studies, line locations, mosaics, etc. A total of 86 drainage studies covering 1,227 square miles, and six hydrology studies covering 3,815 square miles were made during the year, photographic investigation was carried out on seven projects proposed for new alignment, and 194 line miles of proposed locations were projected. Five area studies, using photo interpretive techniques, were carried out to cover an area of 3,380 square miles. Other activities included the production of 71 mosaics covering an area of 8,901 square miles.

STEREOPLOTTING AND CONTROL

This Section, located at Head Office, is responsible for precision photogrammetric instrumentation and related activities in order to produce required 40' to 1" and 200' to 1" plans and cross sections.

As a result of acquiring the Gerber Automatic Drafting machine and associated systems and the conversion to digital photogrammetry, the Zeiss planimats were used constantly in obtaining digital information from aerial photographs, for refinement of information and symbolization, and in experimental procedures related to new programs. This resulted in a greater volume of Departmental stereoplotting activity.

DRAFTING SECTION

Also located at Head Office, this Section is responsible for the photogrammetric and cartographic drafting activity related to the Department. The Photogrammetry Drafting group processed the required drafting on 72 40' to 1" plans prepared by the Stereoplotting and Control group during the year, and the Cartography Drafting group revised and printed the complete set of 16 lithographed County maps.

Research Branch

The research programme this year included further investigation into the performance of pavements and the wear caused by studded tires, and developments arising from the proposed new method of controlling heavy vehicle loads. Increasing attention was also given to developing background information on environmental problems, such as transportation noise and air pollution and the study of future modes of transportation, other than on highways.

Member of the Branch continued to represent the Department on technical committees concerned with highway engineering and to present research papers to appropriate technical organizations. A total of 15 research reports was published during the year, presenting the findings of the various projects undertaken by Department personnel or through the Ontario Joint Highway Research Programme at Ontario Universities.

Pavement Wear Due to Studded Tires

The damage to all types of pavement surfaces and the obliteration of traffic markings caused by the increasing use of studded tires has become a major problem. Measurements of wear show that rutting in the wheel tracks on the busier roads is increasing in depth by between $\frac{1}{4}$ in. and $\frac{3}{8}$ in. each winter. To determine if more wear resistant surfacing materials can be developed, experimental concrete and bituminous pavement sections have been constructed on Highways 401 and 400, respectively. Several miles of a new type of thermoplastic traffic marking material have also been laid. Estimates of the cost of repair work and the extra costs of using more wear resistant materials have been determined for both the Provincial and Municipal Highway Systems: an estimated \$127 million over the next decade. Since complete information is lacking on the safety performance of studded tires in winter driving conditions, studies of winter accidents and the performance of studded tires on both ice and bare pavements are continuing.

Heavy Vehicles—Effect on Pavement and Bridges

Research and development work is under way in two main areas. (1) A means of weighing vehicles while they are in motion is under development. By using special equipment comprising load cells and electronic axle counters, it will be possible to determine individual axle loads, axle spacings and the gross weight of a vehicle without delaying or interrupting its journey. Initially the system will be used as a tool in the study of pavement performance, but when further developed it will have potential as a more effective means of enforcing heavy vehicle load regulations. (2) A load testing vehicle capable of applying a 200,000 lb. load is being used, together with structural analysis, to determine the load carrying capacity of bridges. This vehicle is capable of applying both static and dynamic loads to bridges and will also be used to study certain types of structural vibration. It is expected that data obtained from these studies will permit realistic decisions to be made regarding the strengthening or posting of older bridges, and that improved future design parameters may be established.

Traffic Research

Two research projects described in previous reports are continuing. The first is a study of the feasibility of constructing additional short, periodic passing lane sections on certain

two-lane highways. The problem is being analyzed by means of computer simulation of traffic flow, based on and validated by field traffic studies. The value of the benefits obtained will be compared with construction and maintenance costs for such lanes to determine their feasibility. Work this year has been directed toward perfecting the simulation model and collecting field data for calibration.

Testing and evaluation of a multiple path traffic assignment technique for use in transportation planning has also continued. Emphasis this year has been on developing speed-flow relationships and testing their use in capacity-restraint traffic assignment. Evaluation has included comparing the results with those obtained by incremental capacity-restraint methods.

Work was also begun on preparation of an inventory of conventional and new modes of transportation and development of methods for their evaluation for public transit application in Ontario.

Several small design projects were undertaken this year as a service to the Functional Planning Office. These were concerned with the design of high-speed transfer roadways on freeways and warrants for right-turn lanes at grade intersections.



Structures such as this CNR overpass completed during the year on the St. Mary's Bypass on Highway 7 help make Ontario's highway system one of safest in world.

Highway Safety Research

The main activity in this area has been the continued programme of research in skid resistance. In addition to the measurement of the skid resistance at wet accident locations, general study is being made of the effect that studded tire wear is having on skid resistance. In the case of concrete pavements and thin bituminous surfacings, a significant decline in skid resistance is being reported. Only those pavements containing hard wear resistant coarse aggregates, mainly of igneous origin, are maintaining a high skid resistance.

The new 3-cable guide rail system and breakaway types of lighting poles previously

developed by a programme of impact testing are now being widely introduced on the highway system as new construction is undertaken, or where replacement of existing installations is required. Two additional impact tests were undertaken to develop a safer type of small roadside sign supports.

D.H.O. Technical Reports

Fifteen technical reports were published during the fiscal year. Ten were prepared by Department staff and five submitted by Ontario Universities as a result of research projects carried out under the Ontario Joint Highway Research Programme.

The following reports were prepared by Department staff :

'Simplified Design Live Load Patterns for use in Controlling Vehicle Weights on Bridges', by F. W. Jung (Research and Transportation Systems Branch).

'Laboratory and Field Tests on Concrete Sealing Compounds', by J. Ryell and B. Chojnacki (Materials and Testing Office). Presented at the 49th Annual Meeting of the Highway Research Board.

'Vehicle Weight Regulation and the Effects of Increased Loading on Pavements', by W. A. Phang (Research and Transportation Systems Branch).

'Pavement Wear due to Studded-Tires and the Economic Consequences in Ontario', by P. Smith and R. Schonfeld (Research and Transportation Systems Branch). Presented at the 49th Annual Meeting of the Highway Research Board.

'Four Years' Experience at the Brampton Test Road', by W. A. Phang (Research and Transportation Systems Branch). Presented at the 49th Annual Meeting of the Highway Research Board.

'Skid Numbers from Stereo Photographs', by R. Schonfeld (Research and Transportation Systems Branch). Presented at the 49th Annual Meeting of the Highway Research Board.

'A Design for Low Traffic Volume Roads', by G. J. Chong and G. M. Stott (Research and Transportation Systems Branch).

'Development of a Three Cable Guide Rail System and Other Guide Rail Tests 1967-1968', by P. Smith (Research and Transportation Systems Branch).

'Impact Testing of Lighting Poles and Sign Supports 1967-1968', by P. Smith (Research and Transportation Systems Branch).

'An Evaluation of Quick-Setting Concrete Repair Materials', by B. Chojnacki (Materials and Testing Office).

Five reports were published by the Department under the Ontario Joint Highway Research Programme :

'An Investigation on the Permeability of Asphalt Mixes', by J. R. Davies and R. N. Walker. (Final report on Project Q-5, Queen's University).

'An Investigation of the Strength Properties of Sand Emulsified Asphalt Mixtures', by J. R. Davies and J. A. Stewart. (Final report on Project Q-11, Queen's University).

'Cyclic Creep of Granular Materials', by I. Holubec. (Final report on Project W-13, University of Waterloo).

'A Systems Model for Recreational Travel in Ontario: Further Results', by J. B. Ellis. (Interim report on Project W-9, University of Waterloo).

'Interim Report on the Formulation of an Economic Evaluation Framework for Provincial Highway Investment', by B. G. Hutchinson (Interim report on Project W-11, University of Waterloo).

Operations Branch

The Operations Branch consists of four Offices : Construction, Maintenance, Municipal Roads, and Materials and Testing. Employing approximately 75 per cent of the Department's total staff, this Branch covers the entire Province through 18 operating Districts.

A total of 343 contracts was awarded during the fiscal year, 154 for Maintenance, and 189 for Construction.

CONSTRUCTION OFFICE

This Office is responsible for the direction of the construction program for the entire Province, producing and revising contract and general specifications, direction of the Operations Branch Construction Technician Training Program, control of construction personnel, and the revising of manuals pertaining to construction.

The freeway reconstruction program proceeded on schedule on the Toronto By-Pass section of Highways 27 and 401 during the year, as did the widening of the Queen Elizabeth Way from Oakville westerly, and construction of service roads from Hamilton towards Niagara Falls.

The freeway construction program proceeded on schedule on the Kitchener-Waterloo Expressway, Highway 406 south of St. Catharines, and Highway 417 east and west of Ottawa. The first project on the E. C. Rowe Expressway was started in Windsor, and Highway 144 from Sudbury to Timmins was scheduled for completion in 1970.

In addition to the large projects, reconstruction of various major and secondary highways and the building of many new structures were undertaken during the year.

SUMMARY OF NEW SECTIONS OF KING'S HIGHWAYS

Completed During Fiscal Year 1969-70

New 4-Lane Highways

Hwy. No.	Location	Miles
2	Kingston West Limits to Highway 38	2.5
2	Duff's Corners Easterly	1.7
3	6.7 Miles West of Fort Erie Westerly	6.8
6	Clappisons Corners Northerly	3.0
10	North of Highway 401 to Brampton	3.8
403	Aberdeen Avenue to Highway 2	6.7
406	St. Davids Road to Beaver Dams Road	3.0
417	0.3 Miles East of Highway 7 to Moodie Drive	2.4
Kitchener-Waterloo Expressway	West of King Street Westerly	1.8
	Total	31.7

New 2-Lane

9	Highway 400 Westerly	3.6
41	2.5 Miles North of Cloyne, Northerly	4.2
49	Picton North Limits Northerly	4.5
144	16.2 Miles North of Benny Northerly	8.1
144	51.4 Miles North of Benny Northerly	9.4
631	15.0 Miles North of Hornepayne Southerly	13.1
Lakehead Expressway	Highway 61 to Highway 17	3.5
Lakehead Expressway	Highway 17A to Tertiary Road 800	6.3
Total		52.7

TABLE SHOWING TOTALS OF WORK DONE

Class of Work	No.	Tons	Miles
Automatic Signals at Railway Crossings	9		
Bituminous Hot Mix Pavement		1,927,902	499
Bituminous Mulch and Cold Mix		61,374	68
Bituminous Prime on Gravel Roads . . . Gals.	2,096,919		
Bituminous Resurfacing Old Pavement		442,351	741
Bituminous Surface Treatment Gals.	1,311,849		
Bridges Built	77		
Bridges Painted	87		
Calcium Dust Layer—Gravel Roads		9,349	701
Calcium for De/Icing Roads		11	
Concrete Base Pav't. Asphalt Top		141,437	6
Concrete Pavement			8.74
Crushed Gravel and Stone (by Contract)		10,030,068	
Crushed Gravel and Stone (by Dept. Forces)		566,640	
Grading and Culverts			567
Granular Base on New Grading		12,911,738	670
Granular Base on Old Grading		793,603	221
New Buildings Erected This Year	28		
Off-Road Parks Maintained	225		
Roads Snowplowed and Kept Open (King's Hwys.)			11,391
Roads Snowplowed and Kept Open (Secondary Hwys.)			3,105
Roadside Picnic Places Maintained	489		
Routine Maintenance (King's Hwys.)			11,391
Routine Maintenance (Secondary Hwys.)			
Salt for De-Icing Roads (Raw)		314,766	
Salt in Sand, Stockpiled		36,829	
Sand for Winter Maintenance		776,005	
Scale Houses Maintained	45		
Seeding by Department Forces Acre	1,725		
Shrubs Received and Planted	43,910		
Signs Newly Erected or Replaced	98,501		
Snow Hedges Planted this Year			3.20
Snow Fence Erected, Dismantled, Stored			236
Traffic Lights Installed this Year	42		
Weed Control			13,396
Zone Painting (King's Hwys. & Sec. Hwys.) Gals.		213,014	12,148
Development Roads Built			29

SOUTHWESTERN REGION**Chatham, London, Stratford and Owen Sound Districts**

On the Macdonald-Cartier Freeway 11 underpasses were completed, thus eliminating all level crossings in this area. A bridge over the Belle River on the south service road was completed and opened to traffic.

On Highway 2 a bridge over the Gentleman Creek west of Melbourne was completed and opened to traffic. Sections between Lambeth and Delaware were resurfaced.

With the reconstruction of Highway 3 at the junction of Todd Lane and Cabana Road at Windsor South Limits, the flow of traffic in this area was considerably improved.

On Highway 4, grading and paving between Elginfield and Lucan were completed. A railway overpass was completed and opened to traffic over the C.P.R. tracks east of Walkerton. Work continued on a major grading contract, five miles in length, between Hanover and Walkerton. Formosa Creek Bridge, 2.3 miles south of the east junction of Highway 9 was finished and opened to traffic. Work commenced on the structure and approaches at the Little Ausable River north of Lucan.

Grading, drainage and granular base on Highway 6 from six miles north of Wiarton northerly for 5.8 miles were completed. The connecting link through the Town of Wiarton was widened to 44 feet in the business section. The first six miles north of Wiarton were paved. Work continued at Port Dover on the Lynn River Bridge, a twin bascule, hydraulic lift structure.

On Highway 7, paving of the St. Mary's diversion, including the C.N.R. Overhead Bridge, for a distance of 11.07 miles was finished.

The Silver Creek Bridge in Seaforth on Highway 8 was completed and opened to traffic.

On Highway 9 the Maitland River Bridge, 3.5 miles east of Harriston, was opened to traffic. Grading, drainage, granular base and paving was started from Harriston south limits southeasterly for 8.03 miles. The Teeswater River Bridge in Riversdale was completed and opened to traffic.

Highway 22 was resurfaced from Lobo westerly for 7.5 miles.

On Highway 23, grading, drainage, granular base and paving was commenced from Mitchell north limits northerly for 9.02 miles.

Grading and paving on Highway 24 for two miles north of Simcoe were completed. Also completed was a structural plate pipe culvert, 320 feet in length and 20 feet in diameter with major approach grading, to eliminate an old double arch and concrete structure 0.5 miles south of Duntroon.

On Highway 26, work was started on an eight mile section between Stayner and Collingwood for grading, drainage, granular base and hot mix paving, including a new concrete structure over the Batteaux River. This work is expected to be completed in late 1970.

Highway 77 through the Village of Comber was completely reconstructed with considerable improvement to the drainage system and roadway width.

On Highway 80 from Inwood Road westerly, 7.28 miles was resurfaced and shoulders restored.

A C.P.R. Overhead Bridge at Caradoc on Highway 81 was completed and opened to traffic. Grading, drainage, granular base and paving were completed from Grand Bend east limits southeasterly for 5.11 miles.

On Highway 86 bridge construction, grading, drainage, granular base and paving at Smith Creek, 0.7 miles east of Highway 19 for 0.21 miles, were finished.

Grading, drainage, granular base and paving on Highway 89 from the junction of Highway 87 southerly for 6.46 miles, including channelization at the junctions of Highways 87 and 89, and Highways 23 and 89, was started in 1969. Grading, drainage and granular base from 0.15 south of the junction of Highway 87 southerly for 4.09 miles was completed except for placing of some topsoil and trimming. Grading, drainage and granular base from Mount Forest west limits westerly for 9.15 miles was under way at year's end.



Cutting through solid rock, as on this stretch of Secondary Highway 543 in the Sudbury area, is typical of highway construction difficulties in many parts of Ontario.

CENTRAL REGION

Toronto, Hamilton and Port Hope Districts

Two large contracts were awarded for portions of Highway 401 and Highway 27 interchange and are proceeding on schedule. The last contract to complete the Highway 27 link from Highway 401 to the Queen Elizabeth Way was awarded and is expected to be completed in November, 1971. The continuation of the collector-distributor section of the Macdonald-Cartier Freeway from Warden Avenue easterly to Midland Avenue, including the interchange at Kennedy Road, progressed favourably. The eastbound lane of Highway 401 from Highway 10 westerly for 6.67 miles was resurfaced.

Work continued on the Kitchener-Waterloo Expressway and is on schedule between King Street and Frederick Street.

Reconstruction continued on the Queen Elizabeth Way between Stoney Creek and St. Catharines. Structures and service roads were completed covering 4.5 miles east of Stoney Creek, with the next five miles near completion. Major culverts were finished at both Sixteen and Eighteen Mile Creeks. Six-laning from Highway 122 to Kerr Street in Oakville proceeded satisfactorily. A contract was awarded between Kerr Street and Bronte Road and was ahead of schedule at the end of the year. Construction was started on a new highspeed interchange to replace traffic circles at Niagara Falls.

At Paris on Highway 2, relocation of the Lake Erie and Northern Railways crossing was completed. In Bronte replacement of the old Bronte Creek Bridge with a modern bridge of greater capacity was started. At Welcome construction was completed at the junction of Highway 2 and County Road No. 10.

Reconstruction on Highway 3 from Gorham Road to Gasline from two lanes to four lanes was completed. The intersection of Haldimand County Road No. 17 was channelized, along with improved horizontal alignment.

Work continued on Highway 6 for 5.3 miles north of Highway 5 to Harpers Corners and is near completion.

The new section of Highway 9 from Highway 400 to Highway 27 was opened to traffic, with the surface course of asphalt and shouldering to be completed in the summer of 1970.

Widening of Highway 10 from Victoria northerly for 7 miles was completed but for the final lift of asphalt pavement and final shouldering.

Work on Highway 27 from just north of North Queen Street to Eva Road a distance of 1.92 miles, including a new interchange at Highway 5, as well as a basketweave interchange, progressed and is expected to be completed in the Summer of 1970, nearly one year ahead of schedule.

Grading, drainage, granular base and hot mix paving at the approaches to the C.N.R. subway north of Trenton on Highway 33 was started, with completion expected early in 1970.

On Highway 35, curve revisions south of Cameron, and inter-section improvement at the junction of Highways 35 and 7B west of Lindsay, were completed.

Reconstruction of Highway 47 from Goodwood to Uxbridge was completed with the exception of minor shoulder and guide rail work.

A section of Highway 48 from Sutton easterly for 2.7 miles was completely reconstructed.

On Highway 49 grading, drainage, granular base and concrete paving were completed from Picton North Limits northerly for 4.5 miles.

Reconstruction of Highway 50 from Bolton northerly to Highway 9 proceeded on schedule.

Widening of Highway 58 from two lanes to four lanes through the City of Welland to Highway 406 at Merritt Road was started, with completion expected in 1970.

On Highway 400 the Finch Avenue Cloverleaf was completed and opened to traffic. Resurfacing from Maple to King was completed in both the north and southbound lanes.

An interchange giving access to and from Stanley Avenue to Highway 405 in the City of Niagara Falls was completed.

On Highway 406 a major grading and structure contract was completed at St. Davids Road. Grading, drainage, granular base, paving and structures from Merritt Road northerly to Beaver Dams Road was started, with completion expected late in 1970.

On Highway 507 a prime and double surface treatment was carried out from the junction of Highway 28 northerly for 6.24 miles.

EASTERN REGION

Kingston, Ottawa and Bancroft Districts

On the Macdonald-Cartier Freeway resurfacing was completed of 9.24 miles of highway between Joyceville Sideroad and Gananoque. St. Hilaire Road grade separation, 2.6 miles east of Highway 33, was constructed and opened to traffic. At two structures, waterproofing with hot mix H.L. 1 asbestos modified, was carried out to alleviate deterioration. The nine-mile road interchange at Cornwall was opened to traffic.

On Highway 2, a C.N.R. overpass and four lanes of pavement from the Kingston West Limits to the junction of Highway 38 were completed. Intersection improvement in the Village of Shannonville and resurfacing from two miles west of Belleville to Shannonville began, with completion expected in 1970.

On Highway 7 on the Trans-Canada Highway work was started on grading, drainage, granular base and hot mix paving from Marmora to Madoc Diversion. Resurfacing

from two miles east of Highway 38 easterly for 7.01 miles was completed.

On Highway 7 and 15 reconstruction of two lanes to four lanes from 0.6 miles west of Ottawa west limits westerly, and an underpass at the C.N.R. and C.P.R. transcontinental line was started, with a completion date of October, 1970.

Resurfacing, shoulder widening and site distance improvement on Highway 16 began and will be completed early in 1970.

Resurfacing of Highway 17E from Hawkesbury to the Quebec Boundary was completed. Included in this work were repairs and waterproofing of the two structures at Highway 34 and the structure at Little Rideau Creek.

On Highway 17 alignment improvement for a distance of three miles from 6.3 miles west of Arnprior eliminating three very severe curves was started in October 1969 and will be completed by the fall of 1970.

Grading, drainage, granular base and hot mix paving were completed on Highway 28 from 9.1 miles north of Apsley northerly for 8.66 miles.

Resurfacing on Highways 29 and 15 from the intersection of Highway 7 southerly to Franktown, a distance of 6.62 miles, was completed.

On Highway 38 hot mix paving from 2.56 miles south of Highway 7 southerly for 7.24 miles, and resurfacing from the junction of Highway 2 to Highway 401, were completed.

On Highway 41 paving was completed from Denbigh northerly for 5.1 miles. The Bon Echo Provincial Park Overpass was opened to traffic.

Construction commenced on Highway 42 on grading, drainage, and granular base from 5.8 miles west of Athens to the east limits of Delta and will be completed in 1970.

On Highway 43 grading, placing of cement stabilized base and hot mix paving from Highway 31 westerly for 7.2 miles, was completed.

Paving on Highway 60 from 8.7 miles east of Algonquin Park Station Road easterly for 7.27 miles was completed.

On Highway 62, paving from the junction of Highways 62 and 620 northerly for 9.24 miles, and 8.59 miles from Maple Leaf to Purdy was completed.

On Highway 127 paving was carried out from Highway 62 northerly for 1.03 miles.

Reconstruction of Highway 138 from St. Andrews to Monkland was finished with the exception of the top course of hot mix paving.

On Highway 416, grading, and drainage were completed on the Spencerville By-pass, and granular base and hot mix paving started.

On Highway 417E, two structures at Ramsay Creek and Bear Brook were built, and grading from Ramsayville easterly for 4.8 miles was almost completed. An additional 4.8 miles of grading and culverts was started and is expected to be finished in late 1970.

Three structures at Acres Road, Moodie Drive, and the C.N.R. Overhead near Bells Corners on Highway 417W were opened to traffic. A major contract for grading and drainage from the junction of Highway 7 westerly for 5.5 miles, including the reconstruction of Moodie Drive, was completed.

A three span prestressed girder bridge over the Drag River on Highway 519 near Gelert was opened to traffic.

NORTHERN REGION

Huntsville, Sault Ste. Marie, Sudbury, North Bay and New Liskeard Districts

On Highway 11 construction of the new four-lane Gravenhurst By-pass is progressing ahead of schedule, with the two interchange structures completed and structural steel



Rocks dwarf men and machines as construction proceeds on the Gravenhurst Bypass.

erected at the Gull Lake structures. The project is expected to be opened to traffic in the fall of 1970. Grading, drainage, granular base and paving from the junction of Highway 112 northerly for 12.2 miles were started, and nine miles of paving were completed before shut down in the fall. Resurfacing from the South junction with Highway 11B southerly for 9.6 miles was completed.

Grading, drainage, granular base, hot mix paving and a structure over the Wabi River on Highway 11B, connecting Sink to Armstrong Street in the town of New Liskeard, were completed with the exception of the top course paving, to be completed next summer.

Trans-Canada Highway 17 from Bruce Mines easterly for 10.61 miles was reconstructed and paved. The Sault Ste. Marie Diversion was completed except for a surface course. The section from Speckled Trout Creek through to White River was reconstructed at various locations and resurfaced with a lift of H.L.4. Heyden to Havilland Bay was reconstructed, a project which included a 1.5 mile truck-climbing lane; a surface course will be placed in 1970. The section from the junction of Highway 546 easterly for 11.77 miles was reconstructed and paved with an H.L.4. binder course. Grading from Montreal River northerly for 9.5 miles was started in the fall of 1969. Resurfacing and frost heave treatment from Copper Cliff C.P.R. Overhead westerly for 3.77 miles were completed. A truck-climbing lane was finished from the junction of Wabagishik Road westerly for 0.71 miles. Grading, drainage, granular base and hot mix paving were completed from two miles east of Massey westerly for 14 miles, excluding the Town of Massey.

On Highway 17 grading, drainage, granular base and hot mix paving were completed from Verner westerly to Warren, a distance of 9 miles. From 0.9 miles east of Bissett Creek, easterly for 7.65 miles, grading, drainage, granular base and structure (Grant Creek Bridge Extension) were nearly completed. All that remains is a general trimming operation and installation of guide rail. The C.P.R. Overhead at Deux Rivieres was finished with the exception of the approach slabs and it will be opened to traffic in early June, 1970. Grading, drainage, granular base and hot mix paving from 0.3 miles east of Mattawa east limits easterly for 9.15 miles began, with five miles completed before the end of the season. Work commenced from 1.6 miles West of Mattawa West limits easterly for 3.12 miles for grading, drainage, granular base and hot mix paving, and work was started on a structure (C.P.R. Overhead). The roadway was constructed to profile grade, storm sewers installed and the structure partially completed.

Extensive reconstruction was carried out on Highway 35. Grading from 3.7 miles north of Norland northerly for 4.4 miles was completed, and a further 7.5 miles is underway. Paving from 7.7 miles south of Dorset southerly for 8.6 miles has been completed. Grading from Dorset northerly for 4.61 miles is under way.

On Highway 63 granular base and hot mix paving from Feronia northerly for 8.1 miles were completed.

Grading, drainage and granular base on Highway 65 from one mile west of Kenabeek westerly for 8.4 miles were nearly completed.

On Highway 66 grading, drainage, granular base and a structure west of Highway 11, westerly, which included 3.8 miles of granular base course over a total distance of 8.5 miles west of the contracts west limits, were completed.

Hot mix paving on Highway 67 from Highway 101 to Highway 11, a distance of 14 miles, was completed.

Grading, drainage and granular base on Highway 68 from South Baymouth, Manitoulin Island, northerly for 7.39 miles was started in the spring of 1970.

On Highway 69, grading from Bala southerly for 6.93 miles has been completed. A further contract from Bala northerly for 1.71 miles has been awarded. Two structures to be built as part of this project will eliminate the C.P.R. level crossing and replace the C.N.R. Overhead, which is in poor condition. Grading, drainage, granular base and hot mix paving from the junction of Highway 637 southerly for 18 miles were completed with the exception of the top course of asphalt. Truck-climbing lanes in four locations south of Sudbury for a total length of 2.8 miles were completed. Grading, drainage, granular base and hot mix paving were completed from the junction of Highway 545 northerly for 3.7 miles.

Grading, drainage, granular base and hot mix paving on Highway 101 from the Ontario Northland Subway to the Mattagami River Bridge, a distance of 1.15 miles were finished. Grading, drainage, granular base and hot mix paving was started from 10.6 miles west of Highway 576 westerly for 9.41 miles. Clearing is under way from 15 miles west of Foleyet westerly for 14.7 miles and will be completed early in 1970.

Frost heave treatments and patching were carried out at various locations on Highway 108 from the junction of Highway 17 northerly 18 miles to Elliot Lake.

On Highway 144 a major grading contract from 51 miles to 60 miles north of Benny was completed. Grading, drainage and granular base from 42.54 miles north of Benny northerly for 8.86 miles was close to completion this fall, and eight miles of grading and culverts were completed at the Sudbury end to a point 24 miles north of Benny. The contract for the final link-up with the Sudbury District section from 32.73 miles north of Benny was awarded last fall and work progressed well during the winter.

On Highway 526 a structure and approaches over the Still River at Britt, including 0.2 miles of grading, drainage and granular base were completed.

Grading, drainage, granular base and Structure (Deer Creek) on Highway 539 is well under way from 0.3 miles north of Highway 17 northerly for 3.18 miles. Paving was completed from 3.5 miles north of Highway 17 northerly for 1.89 miles.

On Highway 540 grading, drainage and granular base at Kagawong, involving reconstruction of three concrete culverts on the Kagawong River at Bridal Veil Falls were completed, as was reconstruction of one mile of highway.

From the Sudbury city limits northerly for 4.12 miles, excluding the Town of Garson on Highway 541, grading, drainage, granular base and hot mix paving were completed. Grading, drainage, granular base and hot mix paving were completed from junction of Highway 545 northerly for 1.2 miles to Sudbury Airport.

On Highway 542 from the junction of Highways 68 and 542 northwesterly for 1.2 miles, grading, drainage and granular base were carried out.

Grading, drainage, granular base and hot mix paving on Highway 543 were completed from Sudbury city limits southerly for 4.7 miles, including 1 mile of four-lane undivided curb and gutter section.

Highway 614 was paved from Highway 17 northerly for 12.2 miles, and construction was started on the Black River Bridge, bringing it to the stage where the deck will be completed during 1970.

A structure over the Blanche River, three miles north of Highway 569 on Highway 624 was opened to traffic.

On Highway 629, grading, drainage, and granular base from 1.3 miles south of Timmins north limits to Timmins Airport, a distance of 6.29 miles, were close to completion.

Construction on a 12.5 mile contract was started on Highway 631 from White River northerly to Hornepayne.

NORTHWESTERN REGION

Cochrane, Thunder Bay and Kenora Districts

Work continued in the construction of the various stages of the Lakehead Expressway. Two contracts, for grading and drainage extending from Spruce River Road (Tertiary Road 800) to MacKenzie, were finished and upon completion of paving will be opened to traffic in the summer of 1970. The sections from Broadway Avenue to Neebing Avenue, and from Arthur Street to Golf Links Road, although not entirely complete, were opened to traffic. In these two sections there is a total of four structures.

On Highway 11, reconstruction from Val Albert to the Kapuskasing Airport was completed, and a section from Strickland to Fauquier was started and was near completion. Grading, drainage, granular base and hot mix paving from 8.45 miles north of the junction of Highway 17 at Nipigon, northerly for 11.5 miles, continued with a completion date in early summer of 1970. Resurfacing from Hearst westerly for 9.4 miles, and from the Shekak River easterly for 13.13 miles, and eight miles of a 19 mile contract from Cochrane westerly to Driftwood were completed.

Reconstruction on Highway 17A and 11A involving substantial alignment revisions from 4.6 miles east of Sistonon's Corners easterly for 5.0 miles was well under way, with completion anticipated early in 1970.

Grading and paving on Highway 17 from 2.11 miles east of Borups Corners westerly for 11.22 miles was completed, and the grading and paving a further 9.8 miles immediately to the west was started, with the completion scheduled for late 1970. Surface course paving from Dryden easterly for 9.45 miles, and Dryden westerly for 6.99 miles began in



In a highway construction operation requiring experience and precision, workmen prepare the stage for blasting by drilling to set the charges of dynamite.

the late summer. Construction on the Cameron Bay Bridge in Kenora was started, with completion expected late in 1970. Hot mix paving from Nipigon easterly for 30 miles was started and will be completed in 1970. Reconstruction from Schreiber easterly for 3.5 miles, involving major alignment revisions, continued through the winter, with completion set for 1970.

Reconstruction of the rather deteriorated section of Highway 61 from the old City Limits of Fort William to Highway 130 was started and near completion before winter shutdown.

Grading on Highway 71 from Nestor Falls northerly for 8.92 miles was completed. Clearing was completed and grading under way by late winter on a further 8.23 miles immediately to the north. Clearing was commenced from the junction of Highways 17 and 71 southerly for 10.9 miles.

On Highway 128, the Moon Bridge over the Black Sturgeon River was completed and opened to traffic.

Secondary Highway 631 was completed to 23 miles south of Hornepayne, including an application of prime to the gravel surface. Clearing from 28 miles to 37.4 miles began, with four miles being cleared by year's end.

MAINTENANCE OFFICE

This Office directs and controls all summer and winter maintenance by the Districts on all King's Highways and Secondary Highways throughout the Province. These operations cover all aspects of maintenance within the highway right-of-way, including the travelled surface, shoulders, drainage, roadside safety devices, snow and ice control, zone painting, the design of minor structures and Bailey bridges, inspection of all structures, and the design and supervision of major repair work to existing structures. Construction work by Day Labour forces, the design and care of all landscaping work along highways, and the design and installation of highway lighting and traffic signals also come under the direction of this Office.

Crushing Plant

Working in the Thunder Bay and Kenora Districts, the Department crusher produced 131,838 tons of $\frac{5}{8}$ " crushed gravel, of which 11,830 was placed directly on Secondary Highway 593 in the Thunder Bay District. The remainder was stockpiled for future requirements.

Mulch Pavement

Mulch pavement mixed and laid by Department forces totalled 34.4 miles in six Districts.

Zone Painting

The Department had 22 paint strippers in operation during the year, 16 dual and six single machines, which painted 12,148 miles of King's and Secondary Highways. In addition, yellow paint was applied along the pavement edge for a total of 3,615 miles.

The zone stripper replacement program continued with Toronto and Kenora each receiving a new dual striping unit. Following lengthy testing of the airless spray system of paint application, this type of equipment was incorporated in the new Toronto unit to replace the conventional pressurized tank system.

Signs

District forces manufactured and erected 98,501 signs during the year. Included were fingerboards and other guide signs, intersection and curve signs, and large cantilever and overhead extruded aluminum units.

Winter Maintenance

The winter of 1969-70 was not extremely severe, but because of the frequency of storms more plowing than usual was required and the 735,000 tons of abrasives and 320,000 tons of de-icing chemical used in maintenance operations was considerably above the average.

The Department's program of reducing and preventing contamination of soil and ground waters in the vicinity of sand and salt stockpiles continued with construction of eight Fitzpatrick domes, bringing the total of such structures in use to 15. The additional domes were located at Walkerton and Elsinore in the Owen Sound District; Bath in the Kingston District; Minden, Parry Sound and Bracebridge (2) in the Huntsville District; and Mattawa in the North Bay District.

These structures were all designed and constructed by Department forces, with the exception of the salt dome at Mattawa, which was done by contract. Locations of dome construction are determined on a priority system based on the extent of contamination problems at stockpile sites.

Maintenance Management System

Experience gained from the Maintenance Management System since its inception in 1968 dictated the need for several changes in the basic elements of the system. New methods and procedures were implemented during the year under review for planning and scheduling summer maintenance operations, and new shift systems were introduced to better organize manpower and equipment for more effective snow and ice control programs in winter maintenance.

The Province-wide cost reporting system in use during the year made it possible to use a wider data base to arrive at better standard values for productivity and other performance indicators.

Forestry and Landscape

Programs were approved during the year for the planting of 48,475 trees and shrubs to improve roadsides and patrol and picnic sites in 18 districts. More than 400 large trees were relocated in five Districts and 20,720 trees were removed in the southern Districts for the safety of the travelling public.

Grass seeding operations totalled 16,141,400 square yards during the year and herbicide application for the control of weeds and brush covered 14,191 miles. More than 68,000 pounds of wettable powder herbicides was used to control evergreens, cattail growth, and for soil sterilant work around guide rail. Thickening agents progressed from the experimental stage to the operational on a limited scale in the interest of herbicide drift control.

Inspection and Maintenance of Bridges

More than 1,100 bridges on main highways and secondary roads were inspected by the staff of the Bridge Maintenance Section during the year and District engineers were advised where repairs were required and when load restriction signs should be posted.

Use of rockfilled steel wire gabion was continued throughout the Province for the retention of unstable slopes, prevention of scour, and as piers to support Bailey bridges. Among unique applications was one at Blanche River Bridge on Highway 560, where existing approach fill was removed to a depth of about 15 feet and a gabion toe wall was installed to allow drainage from fresh granular "A" backfill to provide stability for the approach roadway and embankments. The provision of proper drainage relieved excessive pressure on the high ballast walls.

The Groundhog River Bailey bridge was replaced with a heavier structure after a failure under extremely heavy loading at a very low temperature. Examination of the damaged components showed brittle fractures at the sway brace holes. Several other Bailey bridges of similar size were reinforced immediately to avoid possible failures.

Eleven Bailey bridges for temporary detours and several others were designed and erected by the Section following severe flooding in the Sudbury and Sault Ste. Marie Districts, and plans were prepared for 20 structures requiring major deck and expansion joint repairs.

Major steel repairs were made on the Nipigon River Bridge on Highway 17, on three Blanche River crossings in the New Liskeard District, on the Chalk River Bridge on Highway 17, and the Pickerel River Bridge on Highway 69. Painting of 83 bridges and 28,000 lineal feet of handrails was completed during the year, and the steel deck system of the Port Stanley bascule bridge was metallized with aluminum.

Highway Lighting and Signals

During the year 2,415 highway lighting fixtures were installed, 31 traffic signals, 61 flashers, and 252 sign lighting fixtures.

MUNICIPAL ROADS OFFICE

The 1969 subsidizable expenditures by the municipalities increased by approximately \$15,218,000 over 1968, and by \$156,442,000 over 1959.

SUBSIDIES SECTION

During the year under review, 965 municipalities and 46 Indian Reserves received subsidies under The Highway Improvement Act for expenditures in 1969. Aggregate amounts were as follows:

	Road mileage	Approved appropriation	Approved expenditures	Subsidy
Metro Toronto				
Roads	373.0	39,000,000	35,914,342	17,957,1
Subway	—	15,000,000	12,738,742	4,246,2
Counties*	9,104.1	64,472,980	55,507,262	30,565,1
Townships**	48,935.1	92,161,016	89,362,031	52,977,5
Urbans	11,625.3	105,067,681	87,310,660	34,675,5
Totals	70,037.5	315,701,677	280,833,037	140,422,0

*Includes Suburban Commissions

**Includes boroughs, improvement districts and Indian Reserves

COUNTY ROADS

Expenditures during 1969-70 on county and suburban roads decreased by more than \$1,500,000 compared to the previous year due to the formation of the Regional Municipality of Ottawa-Carleton.

Breakdown of 1969 expenditures:	Construction	Maintenance	Total
Roads (winter control excepted)	\$28,914,950	\$11,137,303	\$40,052,2
Bridges and culverts	8,459,360	352,924	8,812,2
Winter control	—	4,132,948	4,132,9
Total approved expenditures	\$37,374,310	\$15,623,175	\$52,997,4

Appreciation of the extent of the work represented by the above figures can be gained from this summary of work done by the Counties and Suburban Commissions:

Construction

1. Roads

414 miles completed at average per-mile cost of \$75,260.

2. Bridges and culverts

(a) Bridges (20' span and over)

70 bridges completed at average cost of \$31.63 per square foot of deck area.

(b) Structures (under 20' span)

Number completed 1

(c) Pipe Culverts installed 3,0

Maintenance

Operation	Miles maintained	Average cost per mile
1. Roadside	9,025	\$216
2. Hard top	6,746	\$463
3. Loose top	2,279	\$998
4. Winter control	9,025	\$415
5. Safety devices	9,025	\$116
6. Bridge and culvert maintenance	9,025	\$ 41

CITIES, TOWNS AND VILLAGES

During the year 33 cities, six separated towns, 144 towns and 154 villages spent \$87,310,660 on urban streets and received Government subsidies totalling \$34,675,515.

COUNTY SUBURBAN ROADS

Thirty-four cities and separated towns in the Province have joined neighbouring counties to form Suburban Roads Commissions. These Commissions have assumed portions of the county road systems of special interest to the cities and separated towns. Their 1969 mileages, expenditures, and government aid are shown below.

County	Suburban Road Commission	Mileage	Approved expenditure	Government subsidy
Brant	Brantford	67.0	344,183	174,440
Elgin	St. Thomas	20.3	74,447	40,856
Essex	Windsor	114.4	804,859	496,334
Frontenac	Kingston	22.5	145,426	74,561
Grey	Owen Sound	25.9	88,186	47,184
Hastings	Belleville	17.7	125,842	75,440
Kent	Chatham	31.5	134,514	67,755
Lambton	Sarnia	26.3	214,372	108,190
Lanark	Smiths Falls	11.0	13,868	6,977
L & G	Brockville	17.5	82,011	43,360
	Gananoque	6.8	26,207	13,173
	Prescott	6.1	18,190	10,377
	Smiths Falls	2.5	3,080	1,540
Lincoln	St. Catharines	49.6	399,073	205,058
Middlesex	London	76.1	573,277	301,393
N & D	Trenton	14.2	15,367	7,796
Ontario	Oshawa	44.7	444,584	232,176
Oxford	Ingersoll	7.3	9,594	4,885
	Woodstock	8.3	84,573	44,120
Perth	St. Marys	6.0	20,178	10,776
	Stratford	22.6	100,251	50,702
Peterborough	Peterborough	24.0	273,010	131,988
	Orillia	9.8	22,019	11,091
Simcoe	Barrie	31.0	83,308	43,390
S.D. & G.	Cornwall	61.0	145,953	76,485
Waterloo	Galt	33.9	126,444	65,240
	Kitchener	60.1	443,116	239,689
	Waterloo	30.1	92,380	46,496
Welland	Niagara Falls	26.9	291,281	154,089
	Port Colborne	6.5	63,754	31,927
	Welland	17.0	152,132	79,485
Wellington	Guelph	26.4	223,705	114,392
Wentworth	Hamilton	164.6	1,395,477	730,796
York	Toronto & York Rds.	195.8	3,231,883	1,749,514
	Totals	1285.4	10,266,544	5,491,675

INCORPORATED TOWNSHIPS

Five Boroughs, 562 Townships, 17 Improvement Districts and 46 Indian Reserves received aid under this part of the Act in 1969. Expenditures made by these 630 Road authorities showed an increase over 1968 expenditures of over \$6,500,000, with a corresponding increase of Government Subsidy of over \$4,350,000.

A breakdown of the 1969 expenditure follows :

	Construction	Maintenance	Total
Roads (winter control excepted)	\$37,518,001	\$29,016,730	\$66,534,731
Bridges and culverts	12,465,131	1,105,610	13,570,741
Winter control	—	9,256,559	9,256,559
Total approved expenditure	\$49,983,132	\$39,378,899	\$89,362,031

These expenditures provided for these major items of work:

Construction Items:

1. Roads

New or rebuilt gravel and stone surfaces	1,339 miles
Low cost bituminous surfaces	237 miles
High cost bituminous surfaces	84 miles
Graded to standard cross-section	1,428 miles

2. Bridges and Culverts

Bridges (10' span and over): Concrete—123; Steel—49; Timber—13	
Total.	185

Culverts (under 10' span) : Concrete—51 ; Steel—372 ; Timber—11

Total 434

3. Pipe culverts installed	6,942
--------------------------------------	-------

Maintenance Items:

1. Surface and Drainage:

Roadside ditching	1,897 miles
Bituminous surface treatment	465 miles
Dust laying—with oil	2,283 miles
with calcium chloride	15,487 miles

Resurfacing

Crushed gravel	3,028,524 cu. yd.
Crushed stone	163,919 cu. yd.
Pit-run gravel	1,132,201 cu. yd.

2. Winter control

Snow removed	46,027 miles
Snow fence erected	2,897 miles

3. Weed and Brush control

By spraying	19,262 miles
By cutting	22,930 miles

4. Bridges repaired	871
Culverts repaired	5,571

DIRECT EXPENDITURES SECTION

Development Roads

Development roads continue as the method by which supplementary assistance is channelled to counties under the county financial arrangements with the Department. Under a new program developed from updated road and bridge needs information, county development roads will be a prominent part of the program.

Eligible local municipalities are benefiting from development roads where the improvements are considered to be beyond their financial capability.

\$19,435,834.35 was spent on 164 development road designations applying to 897.4 miles of roads under the jurisdiction of eligible municipalities. During the fiscal year 52 projects covering 227.6 miles of road were completed and 10 new designations on 45.9 miles of road were made.

Locations, mileages and expenditures on development roads are listed in the appendix.

ROADS IN TERRITORY WITHOUT MUNICIPAL ORGANIZATION

Assistance to Local Roads Boards, Statute Labour Boards and groups of settlers is rendered under Part XI of the Highway Improvement Act.

The amount of contribution to Statute Labour Boards was at least equivalent to the value of the statute labour. Local Roads Boards benefit from a contribution of twice the amount of assessed value of the land in the local roads area. During the year, 174 Local Roads Boards were operating and eight applications for new boards were processed.

The distribution of aid by districts is listed in the following table :

SUMMARY OF UNINCORPORATED TOWNSHIPS EXPENDITURES IN THE FISCAL YEAR 1969-70

Municipal District	Value of statute labour, local roads or other work performed	Direct Expenditure on roads by Department	Total value of work performed	Percentage of aid by Department
5 Muskoka		\$ 14,719.29	\$ 14,719.29	100%
10 Nipissing	\$ 6,853.53	20,973.08	27,826.61	75
11 Nipissing, Muskoka and Parry Sound	72,872.23	271,556.83	344,429.06	79
13 Nipissing, Sudbury and Parry Sound .	148,097.84	402,675.65	550,773.49	73
14 Timiskaming, Sudbury and Cochrane	79,771.47	204,316.19	284,087.66	72
16 Cochrane	59,248.27	189,686.29	248,934.56	76
17 Sudbury, Algoma, Parry Sound, Manitoulin and Nickel Belt	141,141.31	449,367.08	590,508.39	76
18 Algoma	35,607.28	136,524.07	172,131.35	79
19 Thunder Bay and Rainy River	78,194.05	290,482.57	368,676.62	79
20 Kenora and Rainy River	86,760.45	193,189.67	279,950.12	69
Totals	\$708,546.43	\$2,173,490.72	\$2,882,037.15	75

MUNICIPAL STUDIES SECTION

1. *Township Programming Studies*

Programming Studies for Townships proved to be useful and beneficial to both the Township and the Department. During the fiscal year, work was carried out on 22 studies, ten of which were completed and the reports published :

Caradoc Indian Reserve	Moore
Cornwall	Oneida Indian Reserve
Harwich	Pickering
Innisfil	Russell
Mersea	Winchester

The remaining 12 studies, in various stages of completion, are being carried out in the following Townships :

Albion	Enniskillen
Augusta	Markham
Balfour	Matilda
Burford	Osgoode
Charlottenburgh	Sarnia
Chatham	Whitchurch

2. *Urban Roads and Services Programming Studies*

The pilot studies undertaken in the Town of Port Hope and the Township of Saltfleet were completed, and modification made where necessary to the study methodology. Urban Programming Studies are being integrated and carried out in conjunction with Urban Transportation Studies conducted through the Traffic and Planning Studies Office.

3. *Municipal Maintenance Management Project*

During the fiscal year work has continued on the Second Phase of this study, the implementation and testing of a Maintenance Management System in the City of Oshawa and the County of Ontario. Work has progressed in a satisfactory manner and plans are being made for a Third Phase to implement the system and test implementation procedure in an additional seven municipalities during the fiscal year 1970-71.

PLANS APPROVALS

The preparation of Design Criteria by municipalities was initiated in the spring of 1969 to provide an early opportunity for the review of municipal road construction projects. A total of 1,190 Design Criteria covering 1,133 miles of road was approved by the Department.

Detailed plans were required on 500 of these projects. Plans were approved for 358 miles of road construction on 428 by-law projects, and 286 miles of construction on 72 Development Roads.

MATERIALS AND TESTING OFFICE

The Materials and Testing Office provides a technical service consisting of the testing and inspection of materials and manufacturing plants, laboratory and field evaluation of new materials and equipment, preparation of pavement and bridge foundation designs, technical guidance and supervision of quality control of materials and construction processes, and the training of construction inspection staff. These services are carried out through six engineering Sections located at Downsview, and the five Regional offices.

During the year, the administrative control of the Materials and Testing function of the Northwestern Region was assigned to the Regional Director, while technical advice and guidance was provided from Downsview.

FOUNDATION SECTION

The Section is primarily concerned with detailed foundation investigations and evaluation at proposed bridge sites and high embankments for the purposes of determining foundation designs and stability of embankments. Specific problem areas are investigated as required, to arrive at the most economical designs or to provide recommendations for remedial measures. During the year, the Settlement Profiler, developed by the National Research Council, was used for the first time on a high embankment on Highway 417 near Ottawa. An educational video-tape outlining the use of the Settlement Profiler was produced.

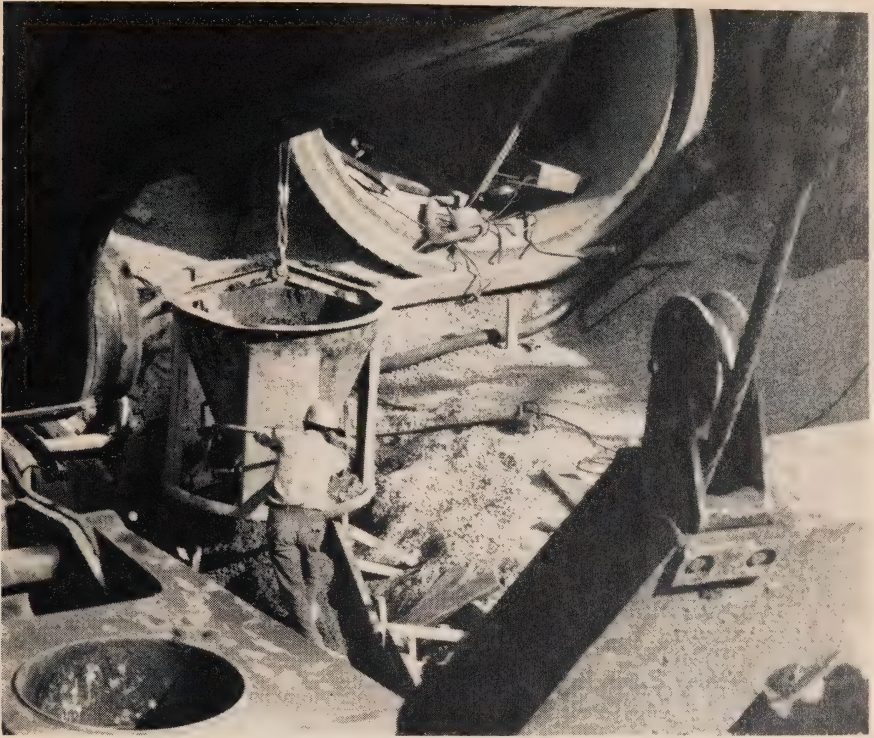
MATERIALS SECTION

The Concrete, Asphalt, and Aggregate groups of this Section are primarily involved in special studies concerning the production of aggregates and their use in the processing and placing of asphalt and concrete paving and structural materials. This includes the revising and updating of construction specifications, where necessary, and the establishment of quality control procedures.

Problems of special interest included :

1. *Highway 400 Test Section*

The planning and constructing supervision of the test section of Highway 400 involved producing and placing 28 different asphalt surfacings to evaluate their durability when exposed to studded-tire wear, and to study variations in skid resistance.



Installation of storm sewers during construction of new interchange at Highway 401 and Kennedy Road shows there is much more to highway construction than meets the eye.

2. Field Trials of Pavement Coring

A special project was carried out which involved field trials of pavement coring, sawing, and the use of nuclear equipment to determine the most accurate and efficient method of quality control for pavement densities.

3. Prime and Surface Treatment Specifications

Revisions were prepared for prime and surface treatment specifications and the prime and double surface treatment special provision.

4. Post-tensioned Concrete Structures

Work is being carried out on the investigation of post-tensioned concrete structure to ascertain the effects of longitudinal and transverse post-tensioning on the water tightness of the deck.

5. Concrete Deterioration

A preliminary investigation of concrete deterioration, due possibly to alkali silica and alkali carbonate reaction in structures, has been completed for all Districts, except those in Southern Ontario.

SOILS SECTION

This Section provides airphoto interpretation and geophysical investigational services to the Regional offices and other Sections as required in the preparation of soils survey designs and for other uses. The Principal Soils Engineer co-ordinates all Regional precontract soils design investigational work, provides technical assistance, and establishes uniform standards of grade and subsurface design through close liaison with

both the Regional soils staff and the Road Design Office. The Section plans, organizes, and co-ordinates all soils' training courses for presentation to the Districts' construction and municipal personnel.

A project of special interest involved the rental of a road logger unit in June and July, which continuously measured the moisture content and density on a print-out. It covered ten contracts in the Toronto and Hamilton Districts during this period.

OFFICE ENGINEER'S SECTION

This Section maintains an inventory of more than 14,000 sand and gravel pits and quarries in Ontario, and produces strip maps detailing the location and suitability of potential granular sources to permit the bidders to more accurately estimate bids for contracts. During the year, 138 such strip maps were produced.

PHYSICAL TESTING SECTION

Physical testing of all materials used in highway and bridge construction and maintenance is carried out by this Section at the Downsview laboratories, as well as in the Regional, temporary, and mobile laboratories, which are also under the technical direction of the Principal Testing Engineer.

The responsibilities of the Section consist of the preparation, testing, and evaluation of aggregates for concrete and asphalt mix designs for proposed construction; the testing of field samples recovered from pavements, structures, and the subsoil to ensure that specified standards of quality control are maintained.

The Section does considerable developmental and acceptance testing of new construction materials and construction techniques. Soils, aggregate, and geological tests and analyses are also done for the Foundation and Regional Soils Sections.

CHEMICAL SECTION

This Section tests and evaluates highway and maintenance materials of a chemical nature for many Sections within the Department, as well as safety, reflective, and preservative products in three specialized chemical laboratories located at Downsview. The Section also investigates problems of contamination, water supply, highway illumination, traffic control devices, and makes prequalifications of manufactured materials.

SIGN AND BUILDING PERMITS SECTION

Building Permits issued during the year by this Section totalled 6,686, with a valuation of \$340,062,982; and 5,432 Field Advertising Sign permits were issued, with a valuation of \$63,115. Other permits issued included: 3,225 Entrance Permits; 1,002 Encroachment Permits; and 1,958 new Sign Permits were issued, and 4,935 were renewed.

— DHO FERRY SERVICES —

DHO maintains five free ferries at three locations in the Province.

—Two ferries operating between the mainland and Wolfe Island logged a total of 5,812 trips during the year and carried a total of 177,406 motor vehicles.

—Two ferries operating between Adolphustown and Glenora made a total of 4,063 trips and carried 210,110 motor vehicles.

—A single ferry operating between the mainland and St. Joseph Island made 3,550 trips during the year and carried a total of 108,303 motor vehicles.

ADMINISTRATION DIVISION

Responsibilities of the Assistant Deputy Minister (Administration) include the following Branches: Financial, Services, and Electronic Computing.

Financial Branch

The following statements outline the expenditure and cash receipts of Department of Highways, Ontario, for the year ended March 31, 1970. The "Expenditure Summary" (Statement II) sets out total ordinary expenditure and capital payments at \$454,647,508.

- I. Ordinary Expenditure
- II. Capital Payments, including Expenditure Summary
- III. Trans-Canada Highway
- IV. The "Queensway"—Ottawa
- V. Burlington Bay Skyway
- VI. Garden City Skyway
- VII. Comparison of Average Unit Prices Paid on Contracts

Pre-Qualification of Contractors

A total of 200 capital contracts was awarded during the year, of which 156, representing 78.0% of the total or 98.0% of the tender value, required the pre-qualification of contractors. Of the 143 ordinary contracts awarded, 71 or 49.7%, representing 85.0% of the tender value, required pre-qualification. An average of 4.8 bids was received on pre-qualified contracts, compared to 4.2 bids on unqualified contracts.

Indices of Tender Prices Paid on Road Contracts and for Materials

To illustrate the trend of prices paid this year in relation to previous years, the following charts show;

Index of Tender Prices Paid on Road Contracts (Chart I)

Index of Tender and Material Prices (Chart II)

CHART I
TENDER PRICE INDICES

Arithmetic Rebasing from:
1950 51 = 100 to 1960 61 = 100
Weight given each item
Cost of sub-item in relation to all items
for Fiscal Year 1964 65

Grading
Paving
Structure
Composite

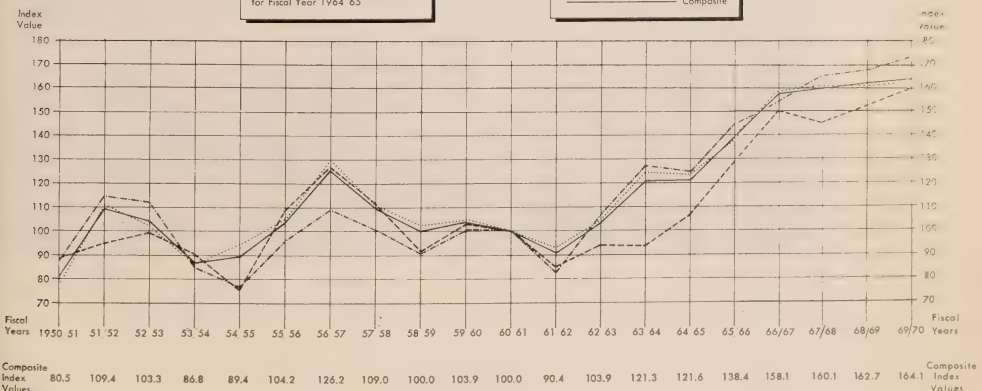
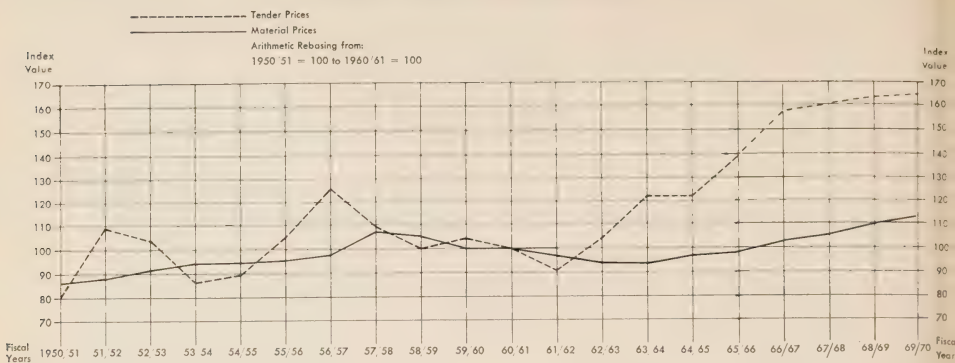


CHART II
COMPARISON OF TENDER AND MATERIAL PRICE INDICES



It could be described as keeping light on the subject as highway crew installs overhead lighting at detour around the old Kennedy Road Bridge on Highway 401.

STATEMENT I

Ordinary Expenditure

For the Fiscal Years Ending March 31, 1970 and March 31, 1969

	Year ending March 31/70	Year ending March 31/69
Maintenance of King's Highways and Secondary Highways—		
Winter Maintenance—		
Contract and day labour	\$ 26,243,663	\$ 23,304,600
Equipment Operating costs due to standby (60%)	(539,817)	1,485,081
Summer Maintenance—		
Patrol costs	16,280,305	16,076,433
Gravel crushing—contract and day labour	923,069	1,069,540
Prime—contract and day labour	810,777	688,867
Hot Mix Patching—contract and day labour	1,572,763	1,550,692
Surface treatment—contract and day labour	308,946	598,835
Mulch—day labour	246,497	236,252
Major bridge repairs	691,817	474,086
Equipment operating costs due to standby (40%)	(359,879)	990,054
Operation of ferries	1,020,938	930,102
Flood and other emergencies	97,116	63,287
District Office Overheads including engineering, warehouse and municipal	11,177,380	11,274,112
Expenditures recovered but credited to revenue	401,601	414,407
Increase (Decrease) in inventories	(210,771)	138,828
	\$ 58,664,405	\$ 59,295,176
Repaving of present roads	3,395,178	2,619,803
Maintenance of development roads	328,088	130,100
Maintenance of roads in Unincorporated Townships in Northern Ontario	1,330,773	1,151,288
Building Repairs (under Gen. Oper. 1969-70)		438,351
Total (see Appendices 1 and 7 for distribution of above expenditures by counties, roads, etc.)	\$ 63,718,444	\$ 63,634,718
	Year ending March 31/70	Year ending March 31/69
General Operating Expenditures—		
Purchase of new trucks, tractors, graders, plows and other road equipment	\$ 4,804,999	\$ 5,212,910
Printing and Stationery	1,120,764	1,105,746
Office furniture and equipment	872,185	479,416
Workmen's Compensation	364,841	326,749
Insurance and Claims	347,076	374,962
Unemployment Insurance Stamps	103,851	95,628
Building Repairs	420,609	
Maintenance of Buildings and area office rentals	215,871	213,754
Teletype rentals	80,805	80,129
Staff training	35,071	51,029
Recoverable expenditures (net)	(14,354) cr.	25,997
Central Stores increase (decrease) in stock	700,993	\$ 9,052,711
		42,625
		\$ 8,008,945
Head Office—		
General Administrative and operating staff salaries	7,171,580	6,878,945
Travelling expenses	382,929	317,992
Electronic Computing Branch salaries, expenses and equipment rentals	1,379,274	2,128,037
Sundry	2,175,540	1,280,601
	\$ 11,109,323	\$ 10,605,575
Roads Publicity, etc.	105,919	178,799
Burlington Bay Skyway toll collection costs	310,952	285,107
Garden City Skyway toll collection costs	228,327	218,460
	539,279	503,567
Municipal Subsidies—		
County Roads	\$ 8,785,995	\$ 8,375,816
Township Roads	18,088,642	17,683,715
Cities, Towns and Villages	25,850,378	23,647,601
	\$ 52,725,015	49,707,132
	\$137,250,691	\$132,638,736
PER PUBLIC ACCOUNTS		
Total Ordinary Expenditures per Public Accounts	\$137,250,691	\$132,638,736

STATEMENT II**Capital Payments****For the Fiscal Years Ending March 31st, 1970 and March 31, 1969**

	Year ending March 31/70	Year ending March 31/69
Construction of King's Highways and Secondary Highways—		
Payments to Contractors	\$106,246,278	\$ 98,815,294
Materials and Sundry Contract Expenditures	40,569,636	39,561,019
Engineering	14,495,956	13,903,815
	\$161,311,870	\$152,280,128
Construction of Development Roads	19,107,746	22,749,211
Construction of roads in Unincorporated Townships in Northern Ontario	924,994	722,688
Expenditures allocated to the above roads—		
Property purchase	\$ 26,988,183	\$ 17,582,476
Land Surveys	—	2,443,958
Buildings	—	1,279,853
	\$ 26,988,183	\$ 21,306,287
Total (see appendices 1 and 7 for distribution of above expenditure by counties, roads, etc.)	\$208,332,793	\$197,058,311
Expenditures of Head Office branches unallocated and not included above:		
Right-of-Way Division	\$ 1,648,150	\$ 1,507,145
Land Surveys	5,144,139	2,261,178
Planning	5,506,355	5,103,984
Design	9,740,354	9,971,946
Program	521,708	438,928
Buildings	1,486,092	8,388
Soils, Materials and Testing	3,850,044	3,828,945
Engineering Audit	1,092,664	1,087,889
Increase (decrease) in Bailey Bridges and steel inventories	74,583	19,249
Net recoverable expenditures debit (credit)	(\$4,955,852)	(4,965,035)
Sundry	218,755	550,932
	\$ 24,326,992	\$ 19,813,544

	Year ending March 31/70	Year ending March 31/69
G.O. Transit		
Salaries	\$ 100,274	\$ 106,990
Travelling	3,327	1,405
Maintenance	281,287	397,803
Railways operating	1,647,536	2,170,753
Costs net		10,111,067
Capital improvements	474,856	\$ 2,507,280
Municipal Subsidies:		
County Roads	\$ 21,515,264	\$ 21,674,816
Township Roads	19,200,258	17,725,898
Cities, Towns and Villages	47,072,832	43,298,420
	87,788,354	82,699,133
Total Gross Capital Payments on Construction	\$322,955,419	\$312,359,011
Less Recoveries:		
Trans-Canada Highway	\$ 4,665,189	\$ 4,104,810
Ottawa Queensway—		
Government of Canada	—	—
City of Ottawa	—	500,000
Railway Bridges	839,413	1,752,403
	5,558,602	6,357,211
Net Capital Payments per Public Accounts	\$317,396,817	\$306,001,800

EXPENDITURE SUMMARY

Ordinary expenditures	\$137,250,691	\$132,638,736
Capital payments, net	317,396,817	306,001,805
	\$454,647,508	\$438,640,541

STATEMENT III**TRANS-CANADA HIGHWAY**

The following statement sets out expenditures and amounts recoverable on the Trans-Canada Highway from the inception of the agreement with the Government of Canada on April 24, 1950.

	Refundable by Government of Canada	Expended by Department
Refunded by the Government of Canada on account of work performed prior to April 24, 1950	\$ 1,569,640	—
Year ending March 31, 1951	2,749,329	\$ 7,043,559
Year ending March 31, 1952	3,453,866	8,242,801
Year ending March 31, 1953	4,103,753	11,746,130
Year ending March 31, 1954	2,486,860	9,686,452
Year ending March 31, 1955	6,274,487	5,675,343
Year ending March 31, 1956	3,365,959	9,602,299
Year ending March 31, 1957	4,855,053	13,996,280
Year ending March 31, 1958	12,381,361	20,683,306
Year ending March 31, 1959	15,803,757	27,995,777
Year ending March 31, 1960	17,662,423	28,412,552
Year ending March 31, 1961	16,500,840	24,786,757
Year ending March 31, 1962	11,623,549	16,168,477
Year ending March 31, 1963	3,958,997	8,164,528
Year ending March 31, 1964	2,990,783	6,784,073
Year ending March 31, 1966	2,617,937	5,591,696
Year ending March 31, 1967	2,536,827	6,432,938
Year ending March 31, 1968	2,290,907	7,329,474
Year ending March 31, 1969	3,805,292	14,884,817
Year ending March 31, 1970	4,104,811	10,942,650
Expenditure by Department for property and other non-recoverable expenditures	4,665,189	12,232,352
Total to March 31, 1970	—	17,231,184
Further claims to be submitted based on expenditures to March 31, 1970	\$129,801,620	\$273,633,445
Claim No. 201	320,000	
Claim No. 202	250,000	
Total Refunds by Government of Canada		\$130,371,620
Net Estimated Cost to March 31, 1970		\$143,261,825

STATEMENT IV**The Queensway—Ottawa**

The following statement sets out expenditures and amounts recoverable on the "Queensway"—Ottawa since the signing of the agreement with the Government of Canada, the Federal District Commission and the City of Ottawa, on March 19, 1957.

Expended by Department:		
Year ending March 31, 1958	\$ 563,956	
Year ending March 31, 1959	1,720,076	
Year ending March 31, 1960	3,860,475	
Year ending March 31, 1961	5,723,245	
Year ending March 31, 1962	3,889,962	
Year ending March 31, 1963	3,778,739	
Year ending March 31, 1964	5,215,154	
Year ending March 31, 1965	3,411,781	
Year ending March 31, 1966	1,904,433	
Year ending March 31, 1967	2,706,434	
Year ending March 31, 1968	558,884	
Year ending March 31, 1969	16,332	
Year ending March 31, 1970	1,590	
		\$33,351,061

STATEMENT IV (Continued)

Recovered from Federal Government:

Year ending March 31, 1958	\$ 204,500
Year ending March 31, 1959	109,221
Year ending March 31, 1960	773,681
Year ending March 31, 1961	1,367,729
Year ending March 31, 1962	1,380,118
Year ending March 31, 1963	951,729
Year ending March 31, 1964	1,211,642
Year ending March 31, 1965	1,071,872
Year ending March 31, 1966	483,000
Year ending March 31, 1967	609,662
Year ending March 31, 1968	258,246
Year ending March 31, 1969	Nil
Year ending March 31, 1970	Nil

Total recovered from Federal Government \$8,421,400

Recovered from the City of Ottawa 7,204,941

Amounts to be recovered from:

The City of Ottawa	\$288,109	
Federal Government under T. C. H. Contracts	761,080	\$1,049,189

Total recoveries \$16,675,53

Net Estimated Cost to March 31, 1970 \$16,675,53

STATEMENT V**Burlington Bay Skyway****Comparative Statement of Toll Collections, Revenues and Expenditures For the Fiscal Years Ending March 31, 1970 and March 31, 1969**

	Year ending March 31, 1970	Year ending March 31, 1969	Increase (Decrease)	Percentage
Revenues:				
Toll Revenue Earned:				
Class I vehicles	\$ 858,495	\$ 818,039	\$ 40,456	4.94
Class II vehicles	96,451	90,289	6,162	6.82
Class III vehicles	214,359	200,036	14,323	7.16
Total Revenue Earned	\$ 1,169,305	\$ 1,108,364	\$ 60,941	5.50
Plus—Tickets and Tokens sold but not presented and other net adjustments	41,732	39,050	2,682	6.87
	\$ 1,211,037	\$ 1,147,414	\$ 63,623	5.54
Add: Premium U.S. Funds*	—	6,518	(6,518)	—
Total Revenue	\$ 1,211,037	\$ 1,153,932	\$ 57,105	4.95
Direct Expenditures:				
Toll operating staff salaries	\$ 274,235	\$ 260,127	\$ 14,108	5.42
Travelling Expenses	789	733	56	7.64
Office Expenses	14,308	2,243	12,065	—
Light, heat, water, telephone, etc.	11,644	8,682	2,962	34.12
Maintenance of buildings	1,227	1,401	(174)	(12.42)
Maintenance of equipment	8,749	11,921	(3,172)	(26.61)
	\$ 310,952	\$ 285,107	\$ 25,845	9.07
Excess of Revenue over Expenditure	\$ 900,085	\$ 868,825	\$ 31,260	3.60
Traffic:				
Class I vehicles	\$10,423,246	\$ 9,913,846	\$509,400	5.14
Class II vehicles	594,127	553,842	40,285	7.27
Class III vehicles	1,268,762	1,193,662	75,100	6.29
Total	\$12,286,135	\$11,661,350	\$624,785	5.36

*In 1969-70 Premium on U.S. Funds transferred to Department of Treasury and Economics.

STATEMENT VI**Garden City Skyway****Comparative Statement of Toll Collections, Revenues and Expenditures For the Fiscal Years Ending March 31, 1970 and March 31, 1969**

	Year ending March 31, 1970	Year ending March 31, 1969	Increase (Decrease)	Percentage
Revenues:				
Toll Revenue Earned:				
Class I vehicles	\$ 589,097	\$ 568,894	\$ 20,203	3.55
Class II vehicles	49,246	46,373	2,873	6.20
Class III vehicles	89,839	85,066	4,773	5.61
Total Revenue Earned	\$ 728,182	\$ 700,333	\$ 27,849	3.98
Plus—Tickets and Tokens sold but not presented and other net adjustments	(740)	(260)	(480)	—
	\$ 727,442	\$ 700,073	\$ 27,369	3.91
Add: Premium U.S. Funds*	—	12,091	(12,091)	—
Total Revenue	\$ 727,442	\$ 712,164	\$ 15,278	2.15
Direct Expenditures:				
Toll operating staff salaries	\$ 209,095	\$ 197,547	\$ 11,548	5.85
Travelling Expenses	766	641	125	19.50
Office Expenses	3,015	4,805	(1,790)	(37.25)
Light, heat, water, telephone, etc. .	9,021	8,459	562	6.64
Maintenance of buildings	1,407	1,484	(77)	(5.19)
Maintenance of equipment	5,023	5,524	(501)	(9.07)
	\$ 228,327	\$ 218,460	\$ 9,867	4.52
Excess of Revenue over Expenditure .	\$ 499,115	\$ 493,704	\$ 5,411	1.10
Traffic:				
Class I vehicles	\$6,313,077	\$6,110,384	\$202,693	3.32
Class II vehicles	265,068	253,091	11,977	4.73
Class III vehicles	500,579	475,438	25,141	5.29
Total	\$7,078,724	\$6,838,913	\$239,811	3.51
Toll Rates:				
Class I , Passenger vehicles and trucks having not more than two axles and a weight-carrying capacity of less than one ton			Cash	Tokens
			.15	.05
Class II , Class I vehicles drawing a trailer, and trucks having not more than two axles and a weight-carrying capacity of one ton or more25	.10
Class III , Class II vehicles drawing a trailer; trucks having three or more axles, and public vehicles45	.15

*In 1969-70 Premium on U.S. Funds transferred to Department of Treasury and Economics.

STATEMENT VII
Department of Highways Ontario
Comparison of Unit Prices on Contracts for Use in Tender Price Index
For Period April 1, 1950 to March 31, 1970

Fiscal year	Clearing acre	Grubbing acre	Earth exca- vation cu. yd.	Earth exca- vation grading cu. yd.	Earth Exca- vation borrow cu. yd.	Rock exca- vation cu. yd.	Gran- ular "A" ton	Gran- ular "B" ton	5/8" Crushed gravel "A" ton	5/8" Crushed gravel "B" ton	Sand cushion ton	Earth com- paction cu. yd.	Com- pac- tion equip- ment hour	Water for com- pac- tion m. gal.	Con- crete in cul- verts cu. yd.	Placing concrete pipe 12" lin. ft.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1950/51	96.78	130.98	.36	—	—	1.42	.87	.90	1.06	.91	.56	.026	—	6.19	20.65	—
1951/52	148.84	151.20	.54	—	—	1.78	1.51	1.32	1.43	1.03	.66	.032	—	7.50	26.57	—
1952/53	125.88	170.20	.39	—	—	1.64	1.38	1.40	1.43	1.30	.77	.029	—	6.74	22.22	—
1953/54	127.63	144.39	.37	—	—	1.27	1.17	1.02	1.34	1.02	.59	.027	—	6.24	23.14	—
1954/55	132.50	153.49	.40	—	—	1.73	1.15	1.19	1.30	1.13	.68	.027	—	6.05	22.06	—
1955/56	184.15	213.20	.44	—	—	1.81	1.28	1.46	1.34	1.28	.62	.035	—	5.69	26.13	—
1956/57	235.79	251.10	.60	—	—	2.43	1.48	1.62	1.41	1.38	.95	.045	—	6.44	32.11	—
1957/58	203.59	257.52	.45	—	—	2.14	1.34	1.30	1.33	1.33	.77	.044	—	5.39	27.56	—
1958/59	190.61	235.17	.40	—	—	2.08	1.26	1.36	1.18	1.17	.69	.042	—	4.48	25.05	—
1959/60	163.30	200.55	.41	—	—	2.01	1.35	1.29	1.16	1.28	.77	—	6.44	4.30	26.09	—
1960/61	162.63	207.19	.43	—	—	1.82	1.18	1.11	1.53	1.27	.68	—	6.65	3.75	24.62	—
1961/62	162.19	188.27	.36	—	—	1.77	1.21	1.08	1.07	1.13	.67	—	8.24	3.21	21.13	—
1962/63	201.68	197.17	.45	—	—	1.85	1.25	1.30	1.20	1.25	.69	—	9.50	3.25	25.79	—
1963/64	270.43	250.92	.57	—	—	2.22	1.49	1.54	1.41	1.36	.72	—	9.50	3.77	28.96	—
1964/65	285.29	299.10	—	.57	.61	2.45	1.39	1.19	1.48	1.48	.83	—	9.50	3.51	28.33	.98
R1965/66	353.87	343.89	—	.67	.70	2.59	1.66	1.39	1.13	1.24	1.04	—	10.85	4.21	40.30	1.69
1966/67	490.98	444.98	—	.76	.83	3.19	1.73	1.51	1.33	1.84	1.03	—	10.83	4.76	41.12	1.74
1967/68	519.22	481.98	—	.72	.87	3.09	1.75	1.32	1.57	1.69	1.09	—	12.12	4.91	44.32	1.85
1968/69	507.06	525.61	—	.67	.78	3.26	1.71	1.46	1.39	1.61	1.26	—	13.16	4.71	45.24	1.85
1969/70	466.23	505.72	—	.69	.81	3.13	1.70	1.62	1.51	1.55	1.14	—	13.50	4.55	43.78	—

STATEMENT VIII

Comparison of Unit Prices on Contracts for Use in Tender Price Index
For Period April 1, 1950 to March 31, 1970

Fiscal year	Supply and place concrete pipe 12" lin. ft.	Placing C.S.P. 18" lin. ft.	Concrete base sq. yd.	Concrete pavement sq. yd.	Concrete base and pavement sq. yd.	Bituminous hot mix top course ton	Bituminous hot mix base course ton	Structural steel fabrication ton	Structural steel erection ton	Structural steel supply and erection ton	Structural steel delivery ton	Concrete in structures cu. yd.	Concrete foundations cu. yd.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1950/51	—	—	—	—	3.19	3.06	223.41	75.09	—	—	—	29.63	—
1951/52	—	—	—	—	4.17	3.99	239.72	76.84	—	—	—	32.29	—
1952/53	—	—	—	—	3.92	4.00	256.02	78.58	—	—	—	33.49	—
1953/54	—	—	—	—	3.08	3.03	216.76	60.27	—	—	—	32.88	—
1954/55	—	—	—	—	2.68	2.75	194.46	40.04	—	—	—	27.36	—
1955/56	—	—	—	—	4.03	3.12	281.23	96.28	—	—	—	36.64	—
1956/57	—	—	—	—	4.51	3.59	354.80	119.12	—	—	—	39.85	—
1957/58	—	—	—	—	4.17	3.28	277.96	87.27	—	—	—	38.11	—
1958/59	—	—	—	—	3.93	2.89	237.93	59.50	—	—	—	31.98	—
1959/60	—	—	—	—	4.31	3.21	246.28	63.69	—	—	—	37.77	—
1960/61	—	—	—	—	3.93	3.37	277.75	75.32	—	—	—	32.66	—
1961/62	—	—	—	—	3.60	2.62	233.71	39.78	—	—	—	29.50	—
1962/63	—	—	—	—	4.40	3.52	267.18	58.48	—	—	—	31.34	—
1963/64	—	—	—	—	4.99	4.30	259.06	50.86	—	—	—	31.85	—
1964/65	—	.67	2.97	2.69	4.51	4.37	—	—	—	322.64	9.03	—	26.53
R1965/66	—	.83	3.38	3.26	4.88	5.02	—	—	—	405.63	4.48	52.41	61.32
1966/67	—	.99	3.83	3.33	5.69	5.48	—	—	—	498.53	10.12	67.55	33.35
1967/68	—	1.21	4.39	4.17	5.56	5.33	—	—	—	426.44	14.18	73.05	35.03
1968/69	—	1.43	4.51	5.50	5.49	5.06	—	—	—	459.43	14.31	75.32	33.67
1969/70	6.92	1.51	—	—	4.99	5.10	—	—	—	482.82	14.60	79.12	36.54
					5.20								38.56

R: Major revision—prices published are adjusted to maintain comparability.

Services Branch

The Services Branch, through its various Sections, including those under the Right-of-Way Office, co-ordinates and expedites services for all other Branches of the Department.

RIGHT-OF-WAY OFFICE

Sections administered by this Office include Land Surveys and Property.

LAND SURVEYS SECTION

This Section develops and formulates policies and procedures for legal land surveys, plan preparation and registration, and related functions affecting surveying operations of the five Regions, which are an integral part of the Right-of-Way Office. The Section also prepares all recommendations for Order-in-Council necessary for the designations, closings, reversions or transfers of highways; maintains a uniform surveying and drafting operation in the Regions; develops and co-ordinates new electronic computing procedures; directs control surveys, and provides professional and technical guidance to Regional staff.

Registrations were obtained for 1,893 plans in the proper registry and land titles offices during the fiscal year. During the same period 142.26 miles of highway were designated as controlled access highways, bringing the total mileage of such highways in the Province to 2,161.82.

The Section conducted a training course for field personnel, attended by 23 candidates, during the year; and qualifying examinations for field and drafting staff were taken by 15 candidates, of whom 105 were successful. Continuation of the apprenticeship program for Ontario Land Surveyors saw two apprentices pass the Final Part 1 examination, and four pass the Final Part 2 examinations.

Co-ordinate Control Surveys—Under the supervision of the Lands Surveys Section, these surveys are in progress on sections of various highways throughout the Province. Of the 3,000 miles completed, including control at the Town of Kenora, City of Thunder Bay, and on Highway 17 from Sault Ste. Marie to the Quebec border, 1,900 miles was to meet requirements of the Photogrammetry Office, and the remaining 1,000 was carried out in co-operation with the Geodetic Surveys Branch of the Federal Department of Energy, Mines and Resources to expand existing systems in the Niagara Peninsula and Windsor areas.

Appendices to this report give details of controlled-access highway designations and assumptions, designations, reversions and transfers of sections of the King's Highway, secondary highways and tertiary road systems.

PROPERTY SECTION

Prior to implementation of The Expropriation Act, 1968, the Department obtained title to its property requirements by registration of a Plan of Expropriation, but in most cases an agreement had already been reached with the property owner.

A complete reorganization of the Department's acquisition procedures has been under-

taken to meet changed conditions brought about by the new Act. Every effort is made to negotiate settlement with property owners. Title is now taken by deed whenever practicable and expropriation is used as little as possible.

A Hearing of Necessity is held to determine if the taking is fair, sound and reasonably necessary should a property owner object to expropriation. Five such hearings have been held since January, 1969, and the Inquiry Officers have found in favour of the Department in each case. During the same period, 240 properties were expropriated and 20 owners withdrew requests for Hearings.

A total of 3,228 agreements was negotiated with property owners during the year and 2,561 were paid with a value of \$22,576,669.11. Expenditures of \$4,411,483.52 on the Kitchener-Waterloo, E. C. Row (Windsor), Ottawa, St. Thomas, Brantford, Brady Street (Sudbury), Hanlon (Guelph), Lakehead and Niagara Expressways increased the total to \$26,988,182.63.

The Property Section is continuing towards the goal of purchasing all requirements prior to commencement of construction. At the close of the fiscal year, the Department was involved with 4,283 owners in the process of appraisal or negotiation.

Eight applications were made to the Ontario Municipal Board during the year, which added to a carry-over of 28 made a total of 36 in these categories: appointments made and awards made, seven; appointments not yet heard, four; appointments not yet given, 11; settlements made and applications cancelled, 14.

Section 43 of the new Act, which permits a former owner to repurchase at the best price offered, has necessitated reorganization of the Section's Property Sales and Management Group. Revenue from sale of surplus land during the fiscal year totalled \$925,931.36, and revenue from leased properties was \$309,374.30.

Among other Sections essential to the operation of the Services Branch are:

SUPPLY SECTION

The Supply Section undertakes the purchase and distribution of most construction and maintenance materials used by the Department. Goods valued at more than \$30 million are ordered annually by the Purchasing Group, with term supply contracts being widely used to cover many items in continuing use. Such contracts establish firm prices for a prescribed period, and delivery of products is scheduled as required. The Purchasing Group also bought motorized vehicles during the year for most other Departments of the Government.

Central Stores at Downsview continued to provide overnight delivery service to most DHO Districts and also maintained a complete rehabilitation service for Bailey bridges, about 200 of which are generally in use on detours and construction.

The Material Control unit of the Supply Section disposes of all used Department equipment. Used motorized DHO equipment and that of several other Departments is sold at public auction, while scrap materials are normally sold by sealed tender. Revenue from these two sources during the year totalled about \$480,000.

EQUIPMENT SECTION

The Equipment Section provides a complete equipment service to the Department of Highways and to other Departments of the Government. All requests for additional or replacement equipment for DHO and from other Departments are processed by this Section, which also receives, inspects and services the equipment and then distributes it throughout the Province.

The Section provides on-the-job mechanical training, instruction, technical guidance and

advice at DHO District garages and is also responsible for the mechanical fitness of a fleet of seven ferries, which must meet or exceed "Steamship" regulations.

Many pieces of equipment used by the Department, but which cannot be purchased, are designed and fabricated by the Equipment Section. Zone Stripers, Tunnel Washers and Automatic Sand Spreader controls are examples. The design and origination of the Fitzpatrick Dome by a staff member is another example of the Section's versatility.

ARTS AND EXHIBITS SECTION

This Section, which is responsible for designing and constructing major exhibits and production of a wide variety of other art work, designed, built, transported and assembled exhibits during the year for the Thunder Bay Exhibition, the Central Canada Exhibition at Ottawa, and the Great Western Fair, London. Six portable-type exhibits were designed and constructed and shown at 40 different County Fairs throughout the Province, and exhibits were designed and constructed for the Exhibits Centre at Niagara Falls. The Section also designed and fabricated exhibits dealing with the Department's anti-litter campaign.

The introduction of audio-visual features in all of the Department's major exhibits proved highly successful and more use of this type of media is anticipated.

Design and construction of new Arctic Watershed signs were also carried out during the year; and working from engineering plans and specifications, two scale models were constructed by the Section showing proposed design features of several new urban freeways.

PHOTOGRAPHY SECTION

This Section is responsible for all photographs taken for official and publicity purposes and for processing film taken by field staff. Two thousand assignments were completed during the year and more than 30,000 prints made. Other projects included filming of a general information movie of tests conducted on skid resistance of various types of tires, and production of several hundred 35 mm colour slides for staff training purposes and for showing at conventions and conferences.

DOCUMENTS SECTION

The Documents Section provides record management services for the Department, including establishment of filing systems, development and implementation of policy regarding periods of retention, uses of microfilm, and storage of records to meet information requirements. The Section is also responsible for library service, and during the year assumed the responsibility for the Map Office, through which maps are distributed internally and to the general public.

SPECIAL SERVICES SECTION

Special Services acts for the Department in liaison with the Department of Public Works in all matters pertaining to buildings, building sites, and office and shop accommodation. The Section is also responsible for all communications within the Department, such as telephone, teletype, radio and video tape facilities. Administration of Service Centres on controlled access highways is another responsibility.

Services Centres—Nineteen Service Centres had been established on the Macdonald-Cartier Freeway at the close of the year and the current Service Centre program for the Freeway has been concluded. The current program for Highway 400 has also been concluded and the four sites now operating on the four-lane section of this freeway appear to be adequate to handle traffic projected for the next few years.

With an estimated one million travellers visiting each Service Centre annually, most lessees have found it necessary to carry out annual renovation and expansion programs, particularly with regard to washroom facilities, sewage disposal systems, parking areas and food dispensing facilities.

Nineteen picnic areas adjacent to existing Service Centres on the Macdonald-Cartier Freeway and Highway 400 were used extensively during the summer of 1969. Development of picnic areas at two new Service Centres near Mallorytown was scheduled for the summer of 1970, with the expectation that facilities would be available for the 1971 summer season. Approval has been received to extend the Service Centre program to new highways of freeway design and suitable sites are being selected.

TENDERS SECTION

Approximately 15,000 tenders were received and processed for 3,567 contracts and sales during the fiscal year by this Section, which processes all tenders on Engineering Projects, Supply Contracts, Obsolete Equipment and Material Sales, Well Drilling Contracts, Photography Contracts and Special Services Projects. More than 2,500 contractors and suppliers attended tender openings arranged by the Section during the year.

The Section issued orders for 2,788 advertisements in 1969-70 at a cost of \$94,080.80 to give notice of lettings of contracts, auction sales, expropriation proceedings, supply contracts, sales of obsolete equipment and material, and to advertise the requirements of Districts and Sections.



Gracefully roller-coaster like in appearance, but eminently more practical, is this newly-paved section of Highway 127 near Maynooth in the Bancroft district.

Electronic Computing Branch

The Electronic Computing Branch provides diversified scientific, engineering, accounting, statistical, and management information for the Department of Highways and other Departments in the Ontario Government.

During the year the Branch was re-organized into three main Offices: Administrative, Development, and Operations.

The Development Office is divided into three Sections—Technical Support, Engineering Systems, and Management Science Systems.

TECHNICAL SUPPORT SECTION

During the year this Section provided technical assistance to the Development and Operation Offices of the Branch and assisted in the maintenance of present operating systems. Development of Software support for the tele-processing system in Kingston and London was also undertaken.

ENGINEERING SYSTEMS SECTION

This Section's responsibilities include design, development and maintenance of systems for various applications covering the entire spectrum of engineering activities within DHO. The following work, on either new systems or major improvements to existing systems, was performed during the year for:

Design Branch

Expansion of the function of most bridge programs

Analysis of continuous prestressed bridges

Analysis of continuous precast-prestressed bridges

Analysis of bridge piers

Geometric design and plotting of highway interchanges

Implementation of the ICES-COGO (Integrated Civil Engineering System, Co-ordinate Geometry)

Design and detailing of culverts

Road design system

Operations Branch

Slope stability analysis (using Janbu's method)

Planning Branch

Road Transportation Planning System (seven new programs)

Public Transportation Planning System (one new program)

Traffic Data Bank System (two new programs)

SIGOP (Traffic Signal Optimization) six programs

Research Branch

Tables of allowable truck loads for Ontario highways (for Department of Transport)

Services Branch

Implementation of ICES-COGO

MANAGEMENT SCIENCE SYSTEMS SECTION

This Section deals with computer applications within three major development types :

- (1) Information Management
- (2) Scientific
- (3) Financial

These applications are developed for use by most of the Department's Branches, Regional and District offices, as well as for outside departments. Application developments usually involve :

- (1) Feasibility Study
- (2) Information Flow Analysis
- (3) System Modular Outline
- (4) Detailed System Analysis
- (5) Program Design
- (6) Programming and Testing
- (7) System Testing
- (8) User Education
- (9) Analysis and Evaluation of User Feedback

New applications developed and existing systems improved upon for the following :

Design Branch

Three Dimensional Analytical Triangulation
Digitized Magnetic Tape Translator

Financial Branch

Expenditure Detail System
Budget Office Reporting System
Cash Disbursement Account System
Unclassified Payroll System
Property and District Annual Reports
Municipal Index and Subsidies
Payments to Contractors
Sundry Owner-Operated Equipment
Annual Report Statistical System

Operations Branch

Concrete Quality Control
Accelerated Strength Tests
Information Retrieval
Winter Maintenance Optimization
Municipal Roads and Streets Statistics
Progress Payment Certificates
Implementation of Cost Data Submission from District Accounting Offices for
Maintenance Management and Equipment Systems
Maintenance Management and Resource Allocation System
Climatological Analysis
Municipal Roads Needs Study

Planning Branch

Accident Analysis and Retrieval System
Study of Project Control Requirements

Research Branch

Construction Analysis and Staff Evaluation

Services Branch

Equipment System
Office Services Inventory System
Land Surveys Analysis Package
DHO Telephone Directory
Directory of Contractors and Suppliers

Personnel Branch

Personnel System

Electronic Computing Branch

Simulation of Computer Job Throughout
ECB Information and Costing System
Application Implementation on Teleprocessing System

Engineering Division

Contract Bid Analysis
Skills Inventory System
Construction Program Integrated Statistical Files System
Management Information System (Pre-Engineering)
Critical Path Analysis System
Predicting Expenditures on Construction Projects
Standardization of Construction Item Code
Highway Inventory System

Department of Civil Service

Pay Research Data Analysis
Unclassified Payroll

Department of Agriculture

Winter Wheat Survey

Ontario Provincial Police

O.P.P. Statistical Reports

Department of Energy and Resources Management

Ontario Well Data
Air Pollution Study

Department of Social and Family Services

Benefit Statistics

Department of Municipal Affairs

Planning Questionnaires

OPERATIONS OFFICE

The ECB Operations Office is responsible for the provision of computer, technical control, keypunching, storage and security of user data records on tape and card media, services through the Branch's Production Section, the scheduling of jobs to meet customer needs, and the monitor and audit of production systems.

Major applications in production for the fiscal year 1969-70:

Area of Application	No. of Jobs	%ECB Production Facilities
Financial Branch	1,810	7.63
Services Branch		
R. O. W. Office.	568	0.68
Office Equipment Section.	424	1.92
Equipment Office	38	0.71
Program Office.	629	8.65
Research Branch	34	3.13
Operations Branch		
District Offices	255	4.86
Materials and Testing Office.	192	2.52
Municipal Roads Office	118	0.92
Maintenance Office	382	3.92
Construction Office	18	0.41
Planning Branch		
Traffic and Planning Studies Office	2,350	32.30
Design Branch		
Bridge Design Office	3,436	3.60
Road Design Office	301	4.64
Eng. Surveys Office	301	1.99
Other DHO Users	991	3.63
Outside User Department and Authorities.	1,237	18.49
	<u>13,084</u>	<u>100.00</u>

3,550 hours were clocked during the year by the ECB computer for all production.

Personnel Branch

The Personnel Branch administers recruitment and placement of staff, staff transfers and promotions, training, organization and classification, personnel records, staff establishment of Branches, the Department's safety program and the Public Service Superannuation Act. It is also responsible for administration of the Public Service Act and Regulations within the Department.

RECRUITMENT SECTION

Department staff requirements during the year increased slightly over that of the previous year. A total of 763 new employees was appointed to the probationary staff, compared to 670 last year. Summer students employed totalled 753, compared to 901 the previous year. Professional staff was recruited at eight Ontario universities and 19 graduates in Civil Engineering were hired following interviews with 127 candidates. In addition 24 Community College graduates were retained from Survey and Civil Technician and Technology courses.

Work Force

At the end of the fiscal year the Department's work force was 11,682. The distribution :

	1969-70	1968-69	1967-68
Administration Division	256	275	241
Northwestern Region	161	—	—
Financial Branch	287	297	317
Services Branch	1,158	1,168	1,228
Planning Branch	404	405	450
Design Branch	763	770	788
Operations Branch	8,416	8,544	9,547
Personnel Branch	49	48	52
Legal Branch	38	31	30
Electronic Computing Branch	114	123	123
Research Branch	36	24	23
Totals	11,682	11,685	12,799

TRAINING SECTION

This Section is responsible for establishing and administering a training program designed to maintain and improve the efficiency of Department operations. Training courses were held at the Downsview Training Centre during the fall and winter months when reduced field activities enabled 1,231 candidates to attend the 51 courses offered. The courses provided instruction in a wide variety of Department activities, including engineering surveying, land surveying, construction surveying, drafting, estimating, quality control, property appraisal, shorthand and instructional techniques. Of the candidates writing examinations in connection with the courses, 84 per cent were successful.

Financial assistance or leave of absence was granted to 350 employees to attend courses conducted by agencies outside the Government Service.

SAFETY SECTION

This Section is responsible for provision of safety training and accident prevention material to Department employees. A total of 6,095 employees received accident prevention instruction during the year. The total includes meetings in various Branches and Districts and lectures at the Downsview Training Centre. The annual Safe and Skilled Driving Competitions were held, with entrants from all Districts; and 1,598 equipment operators entered in the Ontario Safety League Driver Award program received awards, a figure representing a continuing improvement in the safety awareness of our operators.



Giant derricks deliver their heavy loads of concrete with dispatch and precision during this bridge pouring operation at the Kennedy Road interchange on Highway 401.

Northwestern Region

Among the many events during the year to influence the future of DHO operations in the Province was the appointment in January, 1969, of a Director for the Northwestern Region. Where in the past the four Districts of Kenora, Thunder Bay, Sault Ste. Marie and Cochrane operated under a regional establishment made up of managers who reported to appropriate Branches at Head Office in Downsview, the newly-appointed Director assumed overall direction of the Region. With headquarters in Thunder Bay, the Director reports directly to the Deputy Minister.

The appointment of a Regional Director was the outcome of the increasing commitments being undertaken by the Department to improve and expand the highway network over the 182,000 square-mile area of the Northwestern Region. Coupled with this was the increasing involvement of the Department in assisting municipalities to improve their local road systems, and the consequent need for more direct control and co-ordination to maintain the efficient operation of DHO's total functions within the Region.

The new regional organization is considered to be basically a pre-contract engineering operation. It also provides special services to the Districts in the areas of soils, quality control, traffic operation, assignment of field staff, and personnel counselling.

Engineering Services

Organizing the future work program for the various Sections, with emphasis on the 1970 field work was a major activity. An unusually heavy commitment by the Department to access roads projects was expected to stretch the resources of Engineering Surveys and Materials and Testing during 1970 in spite of work completed during the past winter with the help of 20 men loaned from the Districts. New management concepts were introduced, such as scheduling of work with the aid of Scheduling Charts.

Road Design

Several members of the Road Design Office, under the leadership of the Office Project Engineer, were involved in the development of specialized calculations and development of tables using computer techniques. It is expected that use of the tables on normal projects will result in savings in time-consuming repetitive calculations.

Functional Planning

The newly-organized Functional Planning Section produced its first functional report in the abbreviated grey cover form. It is anticipated that with the loan of staff from Road Design and an additional supervisor, the Section will be able to meet the requirements of the pre-contract engineering program for the Region.

The functional Planning Superintendent provided technical advice to the City of Thunder Bay in the preparation of a functional planning report for the Balmoral Street extension to be constructed by the city.

Program

During the last three months of the fiscal year, the Regional Program Officer was engaged in closing and adjusting the current year's program and at the same time submitting recommendations for a revision of the 1970-71 program.

SPECIAL REPORTS

NORTHERN ONTARIO RESOURCES TRANSPORTATION COMMITTEE

Formerly the Mining, Access and Resources Roads Committee, the NORTC completed the following projects during the fiscal year :

- Central Patricia northerly, grading of 11.25 miles from mile 72.5 to mile 83.75.
- Hwy 800 to Armstrong-Hurkett road, grading 12.32 miles to connect with the Armstrong-Hurkett road.
- Balmerton northerly, grading of 8.26 miles from mile 8.77 to mile 17.03.

Total expenditure for the fiscal year was \$1,433,320.

Under an agreement with South Bay Mines Limited, a multi-purpose resource road was graded for approximately 46 miles from Ear Falls to the Confederation Lake area at a cost of \$929,876.

Under a cost-sharing agreement contributions totalling \$97,705.57 were made to the access roads of :

- Agnew Lake Mines Limited
- Extender Minerals of Canada Limited
- Thunder Bay Amethyst Mining Limited
- Tribag Mining Company Limited
- Upper Beaver Mines Limited

TRANS-CANADA HIGHWAY CONSTRUCTION

Total work on the Trans-Canada completed to the end of the year :

Grading and Culverts	1,446.6 miles
Bituminous Hot Mix Pavement	1,359.1 miles
Permanent Bridges and Structures	181

TRANSIT OPERATIONS OFFICE

GO Transit recorded a total of 4,846,100 passenger trips for the year ending March 31, 1970, an increase of four per cent over the preceding year. Passengers travelled an average of 14.6 miles. The operating cost per passenger trip averaged \$1.096 ; revenue was \$0.632, resulting in a deficit of \$0.466 for each passenger trip. The average on-time train performance was 92.4 per cent.

GO Transit parking lots were used at an average of 89.5 per cent of their capacity during the work week. The Port Credit parking lot was expanded from 147 spaces to 333, and Rouge Hill was increased from 126 to 249 spaces.

ENGINEERING AUDIT OFFICE

This Office is divided into two Sections : Field Audit, and Contract Checking.

FIELD AUDIT SECTION

Working under the direction of the Field Audit Supervisor, this Section consists of an estimating group at Head Office, Downsview, and various field personnel located in the five DHO Regions. Regional staffs carry out routine spot checks in the Districts by field surveys and examination of office records on Pre-Engineering Projects, Construction Contracts and Day Labour Projects of all Capital, Maintenance, Development Road and Connecting Link Contracts.

Following the various spot checks and review of records, reports are prepared by the Regional Supervisor's staff and submitted to engineering headquarters at Downsview, from where they are forwarded under covering letter to the District Engineers and others concerned.

In keeping with a new policy of closer control of subsidized spending in the Municipalities, a large number of audits was carried out on a variety of By-Law Subsidy Projects during Fiscal 1969-70. Such audits are designed primarily to determine the methods of control and supervision exercised by the Municipalities and to recommend any necessary changes.

A total of 385 field audits were carried out during the year, along with 400 office audits, and 2,058 weighing audits.

CONTRACT CHECKING SECTION

This Section, working under the direction of the Contract Checking Supervisor, is divided into four checking groups, and is responsible for approval of final estimate pay quantities submitted for various types of contracts audited in their progress stages in the Regions.

Reports outlining conditions of final estimated and final approved pay quantities are prepared on all Capital, Maintenance, Development Road, the majority of Connecting Link, and some By-Law contracts. The reports also take into account any deficiencies in the records and methods of payments, and are used as a basis for standardizing and improving records and payment procedures.

A total of 438 contracts with a monetary value of \$110,089,726.71 was audited by the Contract Checking Section during the year under review.

PROGRAM OFFICE

The Program Office is divided into four Sections : Advance Programming, Urban Programming, the Scheduling Section, and the Special Studies Section.

ADVANCE PROGRAM SECTION

During the year, 253 new work projects with a total estimated value of \$39,000,000 were added to the advance construction program, and 63 projects involving pre-engineering investigations only were programmed.

Many program changes were made during the year, as is normal, with 50 projects valued at \$33,000,000 being added, and 41 to a value of \$31,000,000 were deleted. As each change in a current program has repercussions throughout the five-year advance program, the total of program changes made and documented would amount to several hundred.

URBAN PROGRAM SECTION

The Section continued with its normal work of planning and developing connecting link and special agreement projects in conjunction with urban municipalities. A total of 90 projects to a gross value of \$14,161,000 was processed, with DHO's share of the cost under the various agreements amounting to \$9,473,000. The remaining \$4,688,000 represented cost borne by the various municipalities and subsidies payable by the Department under the Highway Act.

SCHEDULING SECTION

Since each change in program content involves corresponding changes in pre-engineering dates, the current program is greatly influenced by program changes in the advertising and award schedules to comply with fiscal considerations. Scheduling co-ordinators, as a consequence, dealt with their customary heavy work loads in revising schedules and carrying out related liaison with the various Regional engineering offices.

The Systems Group, now in its second year with the Scheduling Section, continued to supply Critical Path Analyses as an aid to construction of major contracts. The Critical Path method, comparatively new to the Department, has also been developed and modified to provide a useful tool for award scheduling; and during the year was used in scheduling and staging construction on major freeway projects, such as the rebuilding of Highways 401, 27 and the Queen Elizabeth Way in Metro Toronto. It was also instrumental in the staging of the East Main Street Tunnel under the Welland Canal in Welland.

Development continued on the Management Information System (M.I.S.) and on the Construction Item Code Book, a coding system based on tender items. When these codes are implemented for computer use, the rapid processing of data will result in significant financial savings to the Department.

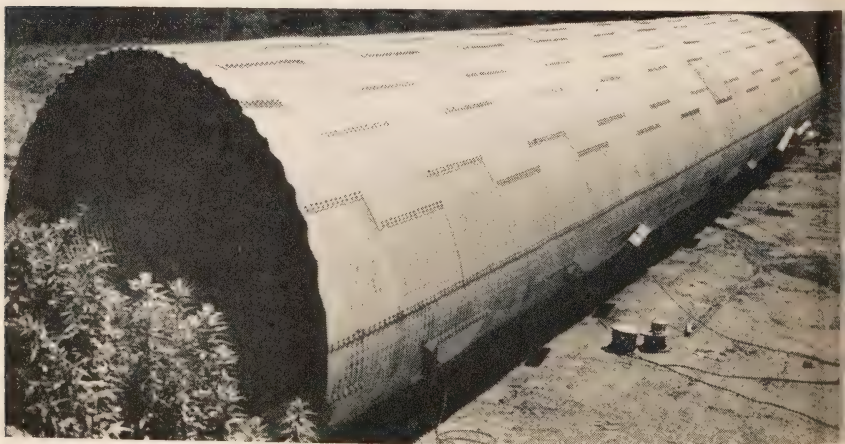
SPECIAL STUDIES SECTION

Provision of consulting services for the recently-established Transportation Systems Office was this Section's principal project during the year. Transit operations in the Metro Toronto area and satellite communities were investigated.

Questionnaire forms were prepared for distribution to residents of the area to elicit such data as car ownership and usage, makeup of households, employment, regular itineraries and modes of travel. Maps were also made to illustrate alternative travel routes and modes within the study area, and comparative cost estimates were derived.



Post tension cables being installed on bridge during widening of Highways 27 and 401, one of the major construction projects undertaken during the fiscal year 1969-70.



Culverts designed to take care of spring run-offs are important to highway construction, as shown here by culvert widening at Eighteen Mile Creek, near St. Catharines.

Construction by Highways 1969-70

*For total mileage
of individual highways
as of March 31, 1970
see Appendix No. 3*

HIGHWAY 2—WINDSOR TO QUEBEC BOUNDARY

Location	Type of Work	Miles or jobs completed this fiscal year
0.20m W. of Lambeth westerly	Grading, culverts, granular base, resurfacing, pavement	5.70 (completed)
Gentleman Creek	Grading, culverts, granular base, pavement, bridge	Completed
Washington St., Paris, easterly	Grading, culverts, granular base, pavement	Partially completed
Twelve Mile Creek, Bronte	Granular base, bridge	Partially completed
Twelve Mile Creek, Oakville	Grading, culverts, granular base, pavement, bridge	Completed
Jct. Hwy. 106 at Welcome	Granular base, pavement	Completed
Jct. Hwy. 106 and County Rd. 10	Grading, culverts	Completed
CPR overhead 1.1m E. of Hwy. 28	Grading, culverts, granular base, pavement, bridge	Partially completed
Belleville to Trenton (sections)	Resurfacing	6
Salmon River at Shannonville	Grading, culverts, granular base, pavement, bridge	Completed
Marysville to Belleville (sections)	Resurfacing	12
Napanee to south jct. Hwy. 49 (sections)	Resurfacing	8
Kingston to Napanee (sections)	Resurfacing	19
0.35m E. of Kingston west limits to W. of Hwy. 38	Grading, culverts, granular base, pavement	Completed
1.7m W. of Hwy. 38 westerly	Pavement	1.62 (completed)
Kingston west limits	CNR overpass	Completed
Gananoque to Kingston (sections)	Resurfacing	15
Crystal Beach to Gananoque (sections)	Resurfacing	12
Cardinal to Brockville (sections)	Resurfacing	20

HIGHWAY 3—WINDSOR TO FORT ERIE

Windsor south limits at jct. with Todd Lane and Cabana Road	Grading, culverts, pavement	9.50
0.7m E. of Hwy. 114	As above	0.12
New Essex Diversion	Grading, culverts	15% completed
Jarvis east limits to Nelles corners	Surface treatment	8.8
Intersection of Haldimand County Road 17	Grading, culverts, granular base, pavement	Completed
6.7m W. of Fort Erie westerly	As above	Partially completed

HIGHWAY 4—PORT STANLEY TO FLESHERTON

0.10m S. of east jct. of Hwys. 3 and 4, southerly	Grading, culverts, granular base, pavement	Partially completed
Kettle Creek structure 0.20m S. of east jct. Hwys. 3 and 4	Bridge	Completed
SE quadrant of Interchange 19 at Hwys. 4 and 401	Grading, culverts, granular base	Completed

Location	Type of Work	Miles or jobs completed this fiscal year
0.39m NW of Hwy. 7 intersection, northwesterly	Grading, culverts, granular base, pavement	2.0 (completed)
Little Ausable River 0.5m N. of Lucan	Bridge	Completed
Horton Municipal chain culvert 2.8m S. of Clinton	Grading, culverts, granular base, pavement	Completed
Formosa Creek Bridge E. of jct. of Hwy. 9	Grading, culverts, granular base, pavement, bridge	Completed
1.4m E. of Walkerton	Bridge	Completed
From Hanover to Walkerton	Granular base, grading and culverts	Completed

HIGHWAY 5—TORONTO TO PARIS

0.57m E. of Hwy. 27 to W. of Hwy. 27	Grading, culverts, granular base, pavement	0.54 (completed)
From East Mall to West Mall on Bloor St.	As above	Completed
Hwys. 5 and 27 Interchange	Concrete paving	Completed

HIGHWAY 6—PORT DOVER TO TOBERMORY

Lynn River structure	Grading, culverts, granular base, pavement, bridge	Under construction
Clappisons Corners to Harpers Corners	Grading, culverts, granular base, pavement	Completed
Jct. of County Rd. 58 to Fergus	Resurfacing	Completed
Warton south limits southerly	Grading, culverts, paving	7.35m (completed)
6.4m N. of Warton northerly	Granular base	4.90 (completed)
Ferndale Corners	Paving	Completed

HIGHWAY 7—SARNIA TO OTTAWA

E. jct. of Hwys. 7 and 21 westerly	Resurfacing	5.8 (completed)
West end St. Marys Diversion westerly	Grading, culverts, granular base, pavement	5.81 (completed)
West Duffins Creek Bridge	As above	Completed
Marmora to Madoc Diversion	Grading, culverts, granular base	Partially completed
Kaladar to jct. Hwy. 38	Resurfacing	26
0.2m E. of Hwy. 38 easterly	Granular base, resurfacing	7.01
0.6m W. of Ottawa west limits westerly	Granular base, pavement	Partially completed

HIGHWAY 8—NIAGARA FALLS TO GODERICH

St. Catharines west limits to Grimsby Beach	Resurfacing	Completed
East limits of Seaforth to west limits of Mitchell	Resurfacing	Completed
Silver Creek at Seaforth	Grading, culverts, granular base, paving, bridge	Completed

HIGHWAY 9—NEWMARKET TO KINCARDINE

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 27 Schomberg easterly to Hwy. 400, including Holland Marsh patrol yard & 3 structures	Pavement	Partially completed
King Lot 35, Concession VI, 0.5m W. of Hwy. 400	Canal bridge	Completed
King Lot 35, Concession VII, 2.0m W. of Hwy. 400	Canal bridge	Completed
King Lots 1 & 2, Concession I, 2.8m W. of Hwy. 400	Canal bridge	Completed
From Hwy. 27, Schomberg easterly to Hwy. 400	Granular base	Partially completed
3.50m E. of Harriston	Maitland River Bridge	Completed
Harriston south limits SE to 1.5m E. of Teviotdale, including the Maitland River tributary structure	Grading, culverts, granular base	Completed
Teeswater River Bridge in Riversdale	Grading, culverts, granular base, pavement, bridge	Completed

HIGHWAY 10—PORT CREDIT TO OWEN SOUND

0.9m N. of Hwy. 401 northerly 3.8m, including structure over Etobicoke Creek	Grading, culverts, granular base, pavement	Completed
Victoria northerly, including Little Credit River Bridge widening	Granular base, grading, culverts, paving	1.99
Little Credit River	Bridge	Completed

HIGHWAY 11—TORONTO TO RAINY RIVER

Gravenhurst Diversion from 0.5m S. of Gravenhurst northerly	Grading, culverts, granular base	Partially completed
South interchange of Gravenhurst Bypass	Bridge	Completed
North interchange of Gravenhurst Bypass	Bridge	Completed
Intersection with Hwy. 516	Grading, culverts, granular base, paving	Completed
From south jct. with Hwy. 11B at Huntsville southerly to Parkersville Road, including resurfacing of Huntsville's Main Street	Granular base and resurfacing	Completed
8.45m N. of Hwy. 17 easterly	Grading, culverts, granular base	Partially completed
Town of Fort Frances Connecting Link on Hwy. 11 from Wright Ave. W. to Town Boundary and intersection at Mill Road	Resurfacing	Completed
Town of Rainy River E. to Seine River Bridge	Pavement	Partially completed

HIGHWAY 14—BLOOMFIELD TO MARMORA

Belleville to Stirling	Resurfacing	Completed
Stirling to Marmora	Resurfacing	Completed

HIGHWAY 15—BARRIEFIELD TO CARLETON PLACE

Location	Type of Work	Miles or jobs completed this fiscal year
Barriefield to Seeley's Bay	Resurfacing	Completed
Elgin to Smiths Falls	Resurfacing	Completed
0.6m W. of Ottawa west limits westerly	Granular base, pavement	Partially completed

HIGHWAY 16—JOHNSTOWN TO OTTAWA

3m N. of Beckett's Bridge northerly	Grading, culverts, granular base, pavement	Partially completed
Kemptville to Johnstown	Resurfacing	Completed

HIGHWAY 17—QUEBEC BOUNDARY TO MANITOBA BOUNDARY

From Hwy. 34, Hawkesbury easterly to Quebec border	Grading, culverts, resurfacing	Completed
Acres Road and Moodie Drive	Grading, culverts, granular base, pavement	Completed
10m N. of Ottawa, northerly	As above	11.27
1.4m W. of Stonecliffe-Grant Creek	Bridge	Completed
Bissett's Creek easterly	Grading, culverts, granular base	Partially completed
Deux Rivières	Grading, culverts	Partially completed
9.2m E. of Mattawa easterly	Grading, culverts, granular base, pavement	15.69 (completed)
Mattawa easterly	Grading, culverts, granular base	Partially completed
0.3m W. of Mattawa east limits easterly	Pavement	3 (completed)
1.6m W. of Mattawa easterly	Grading, culverts, granular base	Partially completed
Verner to Warren	Grading, culverts, granular base, pavement	Completed
C.P.R. overhead, Copper Cliff westerly	Granular base, resurfacing	3.77
Jct. Hwy. 17 and 549	Grading, culverts, granular base, pavement	Completed
From 11.5m W. jct. of Hwys. 17 and 68	Grading, culverts, pavement	16.50 (completed)
From Wabagishik Road westerly	Grading, culverts, granular base, pavement	0.10 (completed)
Jct. of Hwys. 17 and 546 easterly and northerly	As above	11.77 (completed)
Thessalon west limits westerly to Secondary Hwy. 561	As above	Completed
Sault Ste. Marie Diversion, Hwy. 17 East Root River Bridge, Garden River Bridge and Echo Bay Bridge	As above	Completed
0.2m S. of Hwy. 556 northerly	As above	14.30
Government Creek 10.6m N. of Hwy. 552	Grading, culverts, granular base	Partially completed
Montreal River northerly to Speckled Trout Creek	As above	Partially completed
0.6m S. of Michipicoten River southerly	Grading, culverts, granular base, pavement	11.07

Location	Type of Work	Miles or jobs completed this fiscal year
White Lake Narrows westerly	As above	23.88
2.11m E. of Borups Corners westerly	Granular base, pavement	5.66 (completed)
Dryden east limits easterly and Dryden west limits westerly	Granular base, pavement	16.42 (completed)

HIGHWAY 18—LEAMINGTON TO WINDSOR

Canard River Bridge south	Resurfacing	Completed
1.2 and 2.8m N. of N.Y.C. Railway crossing at Amherstburg	Granular base	Completed

HIGHWAY 19—PORT BURWELL TO TRALEE

1.20m S.E. of Thamesford	Granular base, grading, culverts, pavement	Completed
--------------------------	--	-----------

HIGHWAY 21—MORPETH TO OWEN SOUND

Pine River Bridge	Pavement	Completed
Owen Sound to Port Elgin	Resurfacing	Completed

HIGHWAY 22—LONDON TO JCT. HIGHWAY 7

0.50m E. of Lobo westerly	Resurfacing	7.51
---------------------------	-------------	------

HIGHWAY 23—JCT. HIGHWAY 7 TO TEVIOTDALE

Mitchell north limits northerly	Grading, culverts, granular base, pavement	7.10
---------------------------------	--	------

HIGHWAY 24—PORT DOVER TO COLLINGWOOD

Jct. Hwy. 10 westerly	Resurfacing	7.5
Batteau River, 0.52m E. of Jct. Hwys. 24 and 91	Grading, culverts, granular base, pavement, bridge	Completed

HIGHWAY 26—BARRIE TO OWEN SOUND

Stayner to Collingwood	Grading, culverts	Partially completed
Batteau River, 0.5m E. of Collingwood	Bridge	Partially completed

HIGHWAY 27—QUEEN ELIZABETH WAY TO PENETANGUISHENE

Hwy. widening (Etobicoke)	18 bridges	Completed
Hwy. 401 interchange (Etobicoke)	26 bridges	Partially completed
Hwys. 27 and 5 Interchange	Concrete	Completed
CPR N. of Bloor Street	Grading, culverts, granular base, concrete base, bituminous top	0.43 (completed)
From S. of Evans Avenue to N. of CPR	Paving	Completed

HIGHWAY 28—PORT HOPE TO BANCROFT

Location	Type of Work	Miles or jobs completed this fiscal year
9.1m N. of Hwy. 504 northerly	Grading, culverts, granular base, pavement	8.66 (completed)
Bancroft Patrol Yard	Granular base, pavement	Completed
Burleigh Falls to S. of Apsley	Resurfacing	11.80

HIGHWAY 29—BROCKVILLE TO ARNPRIOR

Brockville to Smiths Falls	Resurfacing	21
Hutton Creek culvert extension	Granular base	0.3 (completed)

HIGHWAY 32—GANANOQUE TO HIGHWAY 15

Jct. Hwy. 15 to Gananoque	Resurfacing	11
---------------------------	-------------	----

HIGHWAY 33—KINGSTON TO STIRLING

Frontenac Shopping Mall, Kingston west limits	Granular base, pavement	0.17 (completed)
Trenton to Stirling	Resurfacing	14
1.3m E. of Bath west limits westerly	Resurfacing	8.10

HIGHWAY 34—HIGHWAYS 2 AND 401 TO HAWKESBURY

Glengarry Prescott Russell Line to Hawkesbury	Resurfacing	10
---	-------------	----

HIGHWAY 35—HIGHWAY 401 TO DWIGHT

Curve revision S. of Cameron and intersection improvement at jct. of Hwys. 7B and 35 W. of Lindsay	Grading, culverts, granular base	Completed
7.7m S. of Hwy. 18 at Dorset southerly	Pavement	8.57 (completed)
Moore Falls, east crossing	Bridge	Completed
Moore Falls, west crossing	Bridge	Completed
8.01m N. of Norland northerly	Grading, culverts, granular base	Partially completed
3.7m N. of Norland northerly	As above	Partially completed
Dorset northerly	As above	Partially completed

HIGHWAY 36—HIGHWAY 7 TO BURLEIGH FALLS

Buckhorn to Burleigh Falls	Resurfacing	7.84
North jct. Hwys. 507 and 36 to Buckhorn	Grading, culverts, granular base	Partially completed

HIGHWAY 37—BELLEVILLE TO ACTINOLITE

Tweed to Actinolite	Resurfacing	5
---------------------	-------------	---

HIGHWAY 38—HIGHWAY 2 TO HIGHWAY 7

Location	Type of Work	Miles or jobs completed this fiscal year
2.56m S. of Hwy. 7 southerly	Granular base, pavement	7.24 (completed)
Jct. Hwy. 2 to jct. 401	Resurfacing	Completed
Hwy. 401 to Parkham	Resurfacing	31

HIGHWAY 40—HIGHWAY 3 TO HIGHWAY 402

Bower Creek	Grading, culverts, granular base, pavement, bridge	Completed
Wallaceburg to Courtright	Resurfacing	19.7

HIGHWAY 41—NAPANEE TO PEMBROKE

Napanee to Roblin	Resurfacing	9
Village of Denbigh	Resurfacing	Completed
Denbigh northerly	Granular base, pavement	5.69 (completed)
From 3m S. of Denbigh southerly	Resurfacing	2.23
Bon Echo Provincial Park	Overpass	Completed
1.8m N. of Cloyne northerly	Grading, culverts, granular base	Partially completed

HIGHWAY 42—FORTHTON TO WESTPORT

5.8m W. of Athens to E. limits of Delta	Grading, culverts, granular base	Completed
Athens west limits westerly	Granular base	5.8 (completed)

HIGHWAY 43—ALEXANDRIA TO PERTH

Smiths Falls to Merrickville	Resurfacing	10
Kemptville to South Gower-Mountain Township line	Resurfacing	5
St. Andrews north limits northerly	Grading, culverts, pavement	4.77

HIGHWAY 47—HIGHWAY 48 TO HIGHWAYS 7 AND 12

Goodwood to Uxbridge south limits	Grading, culverts, granular base, pavement	Partially completed
-----------------------------------	--	---------------------

HIGHWAY 48—HIGHWAY 401 TO HIGHWAY 46

Sutton easterly	Grading, culverts, granular base, pavement	2.71
Intersection at Hwy. 47	Grading, culverts	69%

HIGHWAY 50—HIGHWAY 27 TO HIGHWAY 9

Bolton to Hwy. 9 and intersection	Grading, culverts	Partially completed
-----------------------------------	-------------------	---------------------

HIGHWAY 52—HIGHWAY 2 TO WENTWORTH COUNTY LINE

Hwy. 2 to Hwy. 8	Bituminous surface treatment	6.6
------------------	------------------------------	-----

HIGHWAY 53—HIGHWAY 20 TO EASTWOOD

Location	Type of Work	Miles or jobs completed this fiscal year
Kenny Creek Bridge approaches	Grading, culverts, granular base, pavement	Completed

HIGHWAY 58—PORT COLBORNE TO ST. CATHARINES

Thorold Road northerly to Merritt Road	Grading, culverts, granular base, pavement	Partially completed
--	--	---------------------

HIGHWAY 59—LONG POINT PARK TO SHAKESPEARE

Long Point Park entrance westerly	Grading, culverts, granular base, pavement	2.40 (completed)
0.70m N. of Port Rowan to south limits of Langton	Bituminous surface treatment	10

HIGHWAY 60—HIGHWAY 17 TO HIGHWAY 11B

8.7m E. of Algonquin Park Station Road easterly	Granular base, pavement	7.29
Jct. Hwy. 127 westerly	Granular base, resurfacing	8.40
Hwy. 127 E. to Madawaska	Grading, culverts, granular base	Partially completed
Whitney Patrol Yard	Granular base, pavement	Completed

HIGHWAY 61—INTERNATIONAL BOUNDARY TO THUNDER BAY

Jct. Hwy. 130 easterly to Thunder Bay	Grading, culverts, granular base	Partially completed
0.2m W. of Thunder Bay west limits	Bridge	Completed

HIGHWAY 62—HIGHWAY 14 TO QUEBEC BOUNDARY

Madoc-Tudor Township line to Foxboro	Resurfacing	30
0.2m S. of jct. of Hwy. 620 northerly	Granular base, pavement	9.21 (completed)
Maple Leaf to Purdy	As above	Completed
Jct. of Hwy. 620 southerly	Granular base, resurfacing	17.30
4m N. of jct. of Hwy. 60 northerly	Bituminous surface treatment	8.0

HIGHWAY 63—NORTH BAY TO OTTAWA RIVER BRIDGE

Feronia easterly	Granular base, grading, culverts, pavement	8.10 (completed)
Feronia northerly	Resurfacing	8.1

HIGHWAY 64—HIGHWAY 69 TO HIGHWAY 11

Lavigne Patrol Yard	Granular base, bituminous surface treatment, pavement	Completed
7.4m S. of jct. of Hwys. 11 and 64	Grading, culverts, granular base, bridge	Completed

HIGHWAY 65—QUEBEC BOUNDARY TO MATACHEWAN

Location	Type of Work	Miles or jobs comp this fiscal year
Jct. Hwy. 11 westerly	Resurfacing	1.90
Elk Lake westerly	Bituminous surface treatment	4.9
Hwy. 11 westerly	As above	14.0
0.65m W. of Leeville, westerly	As above	6.8
South jct. Hwy. 560 to north jct. 560	As above	0.5
1m W. of Kenabeek westerly	Grading, culverts, granular base	8.4 (completed)

HIGHWAY 66—QUEBEC BOUNDARY TO HIGHWAY 65

South jct. Hwy. 11 westerly	Bituminous surface treatment	11.2
Englehart River, 12.3m W. of jct. Hwy. 11	Bridge	Completed

HIGHWAY 67—IROQUOIS FALLS TO HIGHWAY 101

Jct. Hwy. 101 northerly	Pavement	14 (completed)
-------------------------	----------	----------------

HIGHWAY 68—SOUTH BAYMOUTH TO HIGHWAY 17

Jct. Hwy. 68 through Village of Manitowaning	Bituminous prime	Completed
4.6m S. of Sheguiandah southerly	Grading, culverts, granular base	7.39 (completed)
0.33m S. of Secondary Hwy. 542 westerly	Grading, culverts, granular base	7.23

HIGHWAY 69—HIGHWAY 12 TO CAPREOL

9.5m N. of jct. Hwy. 11 at Gravenhurst northerly	Grading, culverts, granular base	Partially completed
0.2m N. of Hwys. 69 and 545 northerly	Granular base, pavement	3.70 (completed)
Jct. Hwys. 69 and 637 southerly	Granular base, resurfacing	35 (completed)
(Old Hwy. 69) Vicinity of McFarlane Lake	Granular base	1.50 (completed)
Between Huron Road and Hwy. 637	Granular base	0.61 (completed)

HIGHWAY 71—FORT FRANCES TO LONGBOW CORNERS

17m N. of Nestor Falls northerly	Bituminous prime, bituminous surface treatment	7.97 (completed)
Nestor Falls northerly	Grading, culverts, granular base	Partially completed

HIGHWAY 77—LEAMINGTON TO HIGHWAY 401

Jct. Hwy. 401 southerly	Grading, culverts, granular base, pavement	1.08 (completed)
Staples to Essex County Road	Resurfacing	5.25

HIGHWAY 79—JUNCTION HIGHWAY 2 TO HIGHWAY 7

East leg to Hwy. 2 and Bothwell westerly to C.P.R.	Resurfacing	3.4
--	-------------	-----

HIGHWAY 80—HIGHWAY 2 TO HIGHWAY 40

Location	Type of Work	Miles or jobs completed this fiscal year
Jct. Hwy. 40 easterly	Resurfacing	10.2
Inwood Road westerly	Resurfacing	7.28

HIGHWAY 81—DELAWARE TO GRAND BEND

Caradoc Station	Grading, culverts, granular base, pavement, bridge	Partially completed
Grand Bend east limits southerly	Grading, culverts, granular base, pavement	5.11 (completed)

HIGHWAY 86—HIGHWAY 7 TO AMBERLEY

Wingham east limits to jct. Huron County Road 12	Bituminous surface treatment	7.70
Smith Creek	Bridge	Completed

HIGHWAY 89—HIGHWAY 400 TO HIGHWAY 23

Jct. Hwy. 87 southerly to jct. Hwy. 23	Grading, culverts	Partially completed
0.15m S. of Hwy. 87 southerly	Granular base	4.09 (completed)

HIGHWAY 96—QUEBEC HEAD TO WEST END OF WOLFE ISLAND

Wolfe Island easterly	Bituminous prime	6.0
Wolfe Island easterly, including Dawson Point Road	Bituminous surface treatment	17.3

HIGHWAY 97—FREELTON TO HICKSON

Hwy. 6 to east limits of Galt	Resurfacing	13.2
-------------------------------	-------------	------

HIGHWAY 98—BLENHEIM TO WINDSOR

0.1m E. of Hwy. 114	Grading, culverts, pavement	0.16 (completed)
Blenheim west limits to Bloomfield side road	Bituminous surface treatment	7

HIGHWAY 99—DUNDAS TO HIGHWAYS 5 AND 24

Copetown westerly	Bituminous surface treatment	7.6
-------------------	------------------------------	-----

HIGHWAY 101—QUEBEC BOUNDARY TO HIGHWAY 17

Town of Timmins from Mattagami River to ONR subway	Grading, culverts, pavement	Partially completed
10.6m W. of Hwy. 576 westerly 9.41m	Grading, culverts, granular base, pavement	Partially completed
West jct. Hwy. 11 to jct. Hwy. 576	Pavement	Completed
Shawmere River westerly	Granular base	15 (completed)

HIGHWAY 108—HIGHWAY 17 TO QUIRKE LAKE

Location	Type of Work	Miles or jobs completed this fiscal year
Jct. Hwys. 17 and 108 northerly to Quirke Lake	Granular base, resurfacing	Partially completed

HIGHWAY 118—DORSET TO GLEN ORCHARD

3.1m E. of Hwy. 11 easterly	Bituminous prime, bituminous surface treatment	6.53
-----------------------------	--	------

HIGHWAY 119—HIGHWAY 17 TO RICHAN

Jct. Hwy. 17 northerly	Crushed gravel and stone	13
------------------------	--------------------------	----

HIGHWAY 121—HIGHWAY 35 TO HIGHWAY 28

2.0m E. of Hwy. 11 easterly	Bituminous prime	Partially completed
Centre jct. Hwy. 648 easterly	Bituminous surface treatment	5.5

HIGHWAY 124—PARRY SOUND TO SUNDRIDGE

4.0m E. of McKellar to Dunchurch	Granular base, bituminous prime	6.0
From Hwy. 69 easterly	Grading, culverts, granular base	3.22 (completed)
From 4.8m E. of Hwy. 69 easterly	Grading, culverts	0.5

HIGHWAY 127—HIGHWAY 62 MAYNOOTH TO HIGHWAY 60

Hwy. 62 northerly	Pavement	1.03
1.1m N. of jct. of Hwy. 62 northerly	Bituminous surface treatment	9.9
From Maynooth northerly	Granular base	1.03

HIGHWAY 128—KENORA TO REDDITT

Black Sturgeon River	Bridge	Completed
8.3m N. of Hwy. 598 northerly	Grading, culverts, granular base	0.90 (completed)

HIGHWAY 129—THESSALON TO CHAPLEAU

8.5m N. of Hwy. 17 northerly	Granular base	0.30
Replacing washout 3.7m and 4.2m N. of Peshu Lake Road	Grading, culverts	0.32
From 3.7m of Peshu Lake Road	Granular base	0.26
Hwy. 101 northerly and from 1.8m S. of south jct. Hwy. 101 southerly	Bituminous prime, bituminous surface treatment	26.44

HIGHWAY 138—CORNWALL TO MONKLAND

St. Andrews north limits northerly including two bridges and DHO Patrol Yard	Granular base, grading, culverts, pavement	4.77
North Raisin River north and south	Bridges	Completed
North Raisin River north and south bridges and DHO Patrol Yard	Granular base	7.82 (completed)

HIGHWAY 144—SUDBURY TO HIGHWAY 101

Location	Type of Work	Miles or jobs completed this fiscal year
Cartier northerly to 2.0m N. of Benny	Granular base, crushed gravel and stone, grading, culverts	Partially completed
2.4m N. of Benny northerly	Bituminous prime	22
Mollie River	Bridge	Completed
Eastsands River	Bridge	Completed
32.7m N. of Benny northerly	Grading, culverts, granular base	9.61 (completed)
42.5m N. of Benny northerly	Grading, culverts, crushed gravel and stone, granular base	8
51.4m N. of Benny northerly	As above	0.51
Jct. Hwy. 101 southerly	Pavement	2.78 (completed)

HIGHWAY 400—TORONTO TO COLDWATER

Finch Avenue Overpass and Interchange	Grading, culverts, granular base	Completed
S. of Maple Sideroad to N. of King Sideroad	Grading, culverts, granular base, pavement	7.07 (completed)

HIGHWAY 401 (MACDONALD-CARTIER FREEWAY)—WINDSOR TO QUEBEC BOUNDARY

South Service Road, Belle River Bridge, including Belle River Patrol Yard	Grading, culverts, granular base	0.38
Belle River	Bridge	Completed
South Service Road 8.7m W. of Hwy. 77	Pavement	0.39 (completed)
Tilbury W. and Rochester Twp. line	Underpass, grading, culverts, granular base, pavement	0.36
Rochester Twp. Road	Underpass, grading, culverts, granular base, pavement	0.51
Essex County Road	Underpass, grading, culverts, granular base, pavement	0.48
North Service Road, 1.5m E. of Hwy. 77 easterly	Grading, culverts, granular base	0.84
Westbound lane, Interchange 8	Resurfacing	.3
Drake Sideroad	Underpass, grading, culverts, granular base	0.47
Dillon Sideroad	Underpass, grading, culverts, granular base, pavement	0.52
Centre Line Road	Underpass, grading, culverts, granular base, pavement	0.39
Coyne Road	Underpass, grading, culverts, granular base, pavement	Completed
Willey Sideroad	Underpass, grading, culverts, granular base, pavement	Completed
Dingman's Creek tributary structure	Bridge	Completed
Dingman's Creek Road	Underpass, grading, culverts, granular base, pavement	Completed
Dunwich Road	Underpass	Completed

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 10 westerly	Pavement	6.67 (completed)
Hwys. 401 and 27 Interchange including Hwy. 27 and Richview Sideroad Interchange	Granular base, grading, culverts, concrete paving, 26 bridges	Partially completed
Hwy. 401 & Kennedy Road Interchange, including DHO Patrol Yard at Kennedy Road	Granular base, grading, culverts, concrete paving	Partially completed
Trenton to Tyendinaga-Thurlow Twp. line	Resurfacing	18
6.26m E. of Moira River easterly	Granular base, resurfacing	Partially completed
Vicinity County Rd. 11A Underpass	Granular base, resurfacing	0.89
St. Hilaire Road	Grading, culverts, granular base, bridge	Completed
Jct. Hwy. 15 to west of jct. Hwy. 38	Resurfacing	8
Joyceville Sideroad to Gananoque	Granular base, resurfacing	0.89
Shanley Road to Chrysler Memorial Park Road	Resurfacing	12.80
Nine Mile Road Interchange	Grading, culverts, granular base, bridge	Completed

HIGHWAY 403—BURLINGTON TO BRANTFORD

Aberdeen Avenue, Hamilton, to Mohawk Road	Granular base, pavement	Partially completed
Hamilton Drive westerly	Granular base, pavement	1.70 (completed)
Hamilton Drive easterly	Granular base, pavement	2.50 (completed)

HIGHWAY 405—JUNCTION QUEEN ELIZABETH WAY TO U.S. BORDER

Stanley Avenue Interchange	Grading, culverts, granular base, pavement	Completed
----------------------------	--	-----------

HIGHWAY 406—HIGHWAYS 20 AND 58 TO QUEEN ELIZABETH WAY

Merritt Road northerly	Grading, culverts, granular base, pavement	Partially completed
St. David's Road	4 bridges	Completed
Decew Road	Underpass	Completed
Gibson Lake	Bridge	Completed
Beaver Dams Road	Underpass	Completed
CNR	Overpass	
Beaver Dams Road to St. Davids Road	Grading, culverts, concrete paving	Partially completed

HIGHWAY 416—OTTAWA TO HIGHWAY 401 AT JOHNSTOWN

South Nation River	Bridge	Completed
5.9m N. of Hwy. 401, northerly 3.59m	Granular base, grading, culverts	Partially completed

HIGHWAY 417—OTTAWA TO QUEBEC BOUNDARY

Location	Type of Work	Miles or jobs completed this fiscal year
0.25m E. of Hwys. 7 and 15 westerly	Granular base, grading, culverts, pavement	2.69 (completed)
Acres Road	Underpass	Completed
Moodie Drive	Underpass	Completed
CNR overhead	Bridge	Completed
Corkstown Road, Moodie Drive, Acres Road and County Sub-road 9	Granular base, grading, culverts, pavement	8.54 (completed)
Baseline Road easterly	As above	Partially completed
Bear Brook	Bridge	Completed
Ramsay Creek	Bridge	Completed

QUEEN ELIZABETH WAY—FORT ERIE TO TORONTO

Hwy. 27 Interchange	Grading, culverts, granular base, concrete base, pavement	Completed
7.0m W. of Hwy. 10 westerly	Grading, culverts, granular base, concrete base	Partially completed
Bronte Road easterly	Granular base	0.80
Service Road, Lake Avenue, Hamilton to Glover Road	Grading, culverts, granular base, pavement	Partially completed
Service Road, Glover Road easterly	As above	3.50 (completed)
Service Road, Lincoln Avenue, easterly	As above	0.47 (completed)
Grimsby west limits to Vineland Interchange	Grading, culverts, resurfacing	9.7
Grays Road	Underpass	Completed
Millen Road	Underpass	Completed
Fruitland Road	Underpass	Completed
Glover Road	Underpass	Completed
Winona Road	Underpass	Completed
Fifty Road	Underpass	Completed
Oakes Road	Underpass	Completed
Ofield Road	Underpass	Completed
18 Mile Creek, north and south service roads	Bridges	Completed
Tufford Road	Bridge	Partially completed
15 Mile Creek, south service road	Bridge	Partially completed
16 Mile Creek, north and south service roads	Bridges	
Seventh Street	Underpass	
Ontario Street, Beamsville	Underpass	
Jordan Station to Seventh St.	Grading, culverts	2.36 (partially completed)

KITCHENER-WATERLOO EXPRESSWAY

Location	Type of Work	Miles or jobs completed this fiscal year
Frederick St. to N. of Bridgeport Road	Grading, culverts, granular base, pavement	Partially completed
Homer Watson Blvd. to W. of King Street	Granular base, pavement	Partially completed
N. of Bridgeport Road to King Street	Grading, culverts, granular base, pavement	Partially completed
CNR	Underpass	Completed
Frederick Street	Underpass	Completed
Victoria Street	Underpass	Completed
Wellington Street	Underpass	
Lancaster Street	Underpass	Completed
Bridgeport Road	Underpass	Completed
Courtland Road	Overpass	Completed
Ottawa Street South	Overpass	Completed
Homer Watson Blvd.	Overpass	Completed
University Ave.	Underpass	Partially completed
King Street N.	Underpass	Partially completed
Laurel Creek—Hwy. 435	Bridge	Partially completed
Laurel Creek—University Ave.	Bridge	Partially completed

THUNDER BAY EXPRESSWAY

Jct. Hwy. 61 northerly	Pavement	Completed
Broadway Ave. northerly	Granular base, pavement	Completed
Jct. Hwys. 11 and 17 easterly	Grading, culverts, pavement	Completed
3.6m E. of Tertiary Road 800	Bridge	Completed

SECONDARY HIGHWAYS**500—DENBIGH TO BANCROFT**

Bancroft easterly	Bituminous prime	8.0
5.4m E. of McArthur	Grading, culverts, granular base	0.70

501—PORT SEVERN TO HONEY HARBOUR

0.4m S. of Bass Bay Road northerly	Grading, culverts, granular base	1.20
------------------------------------	----------------------------------	------

503—KIRKFIELD TO TORY HILL

Norland to Sebright	Bituminous prime	8.0
Jct. Hwy. 121 southerly	Bituminous surface treatment	6.1

505—HIGHWAY 46 TO HIGHWAY 503

Uphill to Victoria Road	Bituminous prime	10
Jct. Hwys. 46 and 505 to jct. Hwys. 503 and 505	Crushed gravel and stone	11.8

506—JUNCTION HIGHWAY 41 TO PLEVNA

Location	Type of Work	Miles or jobs completed this fiscal year
3.7m E. of jct. Hwy. 41 easterly	Crushed gravel and stone, bituminous surface treatment	17.3

507—HIGHWAY 28 TO HIGHWAY 503

Hwy. 28 northerly	Bituminous prime, bituminous surface treatment	6.24
Jct. Hwys. 28 and 507 northerly	Crushed gravel and stone	13.1
Jct. Hwy. 503 southerly	Bituminous prime	15.4
1.5m S. of Gooderham southerly	Grading, culverts, crushed gravel and stone, granular base	Partially completed

509—HIGHWAY 7 TO SNOW ROAD

Hwy. 7 to Snow Road	Crushed gravel and stone	12.06
---------------------	--------------------------	-------

511—SEC. HIGHWAY 508 TO BRIGHTSIDE

Brightside to Calabogie	Crushed gravel and stone	20.5
-------------------------	--------------------------	------

513—DACRE TO HYNDFORD

Jct. Hwy. 132 northerly	Bituminous prime	10
-------------------------	------------------	----

514—HIGHWAY 35 TO INTERLAKEN

Hwy. 60 to Interlaken	Bituminous prime	10
-----------------------	------------------	----

515—COMBERMERE TO FOYMOUNT

Hwy. 62 southerly	Bituminous surface treatment	3.9
Quadeville westerly	Grading, culverts, crushed gravel and stone, granular base	Completed

516—PORT SYDNEY TO WINDERMERE

Intersection Hwy. 11	Grading, culverts, granular base, pavement	Completed
Hwy. 11 westerly	Grading, culverts, granular base	5.06 (completed)

517—HIGHWAY 62 TO NEW CARLOW

Hwy. 62 southerly	Bituminous prime	10.0
-------------------	------------------	------

518—SAND LAKE TO HIGHWAY 69

Hwy. 69 to Sprucedale	Bituminous prime	12.0
1.9m E. of jct. Hwy. 69 easterly	Grading, culverts, crushed gravel and stone, granular base	1.0 (completed)

519—HIGHWAY 121 TO END OF HIGHWAY

Location	Type of Work	Miles or jobs completed this fiscal year
1.3m S. jct. Hwys. 519 and 121	Bituminous prime	1.5 (completed)
W. Guilford Road northerly	Grading, culverts, granular base	Partially completed
4m E. of Hwy. 121 easterly	Bituminous surface treatment	8.0
Drag River	Bridge	Completed
3.1m S.W. of Lochlin	Grading, culverts, granular base	0.56 (completed)

520—BURKS FALLS TO ARDBEG

Dunchurch to Ardbeg	Bituminous prime	16.5
Magnetawan Village	Granular base	0.50 (completed)

522—TROUT CREEK TO ESS NARROWS

Loring westerly	Bituminous prime	13.7
Trout Creek to Kawigamog Lake	Crushed gravel and stone	48.9
Golden Valley	Grading, culverts, granular base	1.10 (completed)
3.5m E. of Arnstein easterly	Grading, culverts, granular base	1.00 (completed)

523—HIGHWAY 60 TO HASTINGS COUNTY

6m S. of Hwy. 60 southerly	Bituminous prime	7.0
----------------------------	------------------	-----

524—SEC. HIGHWAY 534 TO SEC. HIGHWAY 522

Hwy. 522 to Hwy. 534	Bituminous prime	3.0
----------------------	------------------	-----

526—HIGHWAY 69 TO BRITT

Hwy. 69 to Britt	Bituminous prime	2.3
Still River	Bridge	Completed
Still River Bridge	Crushed gravel and stone, granular base	0.18

528—HIGHWAY 64 TO WOLSELEY BAY

Hwy. 64 to Wolseley Bay (including 528A)	Crushed gravel and stone, bituminous prime	Completed
--	--	-----------

529—SOUTH JCT. HIGHWAY 69 TO NORTH JCT. HIGHWAY 69

Hwy. 529 to Bayfield Wharf	Bituminous prime	3.0
----------------------------	------------------	-----

530—SEC. HIGHWAY 519 TO HIGHWAY 35

Hwys. 519 and 530 westerly	Bituminous prime	16.5
----------------------------	------------------	------

531—HIGHWAY 17 TO BONFIELD

Jct. Hwy. 17 to Bonfield	Crushed gravel and stone	2.3
--------------------------	--------------------------	-----

532—HIGHWAY 11 TO HIGHWAY 69

Location	Type of Work	Miles or jobs completed this fiscal year
0.3m N. of jct. of Hwy. 516	Grading, culverts, crushed gravel and stone, granular base	Completed

533—MATTAWA TO HIGHWAY 63

12m N. of Mattawa northerly	Bituminous prime	13.7
Mattawa to jct. Hwy. 63	Crushed gravel and stone	32.2

534—POWASSAN TO RESTOULE

Powassan westerly	Crushed gravel and stone, bituminous prime	12.2
Powassan to Restoule (Including Hwy. 524)	Crushed gravel and stone	25

535—NOELVILLE TO RIVIERE VEUVE

Noelville northerly	Bituminous prime	9.3
Noelville to Riviere Veuve	Crushed gravel and stone	29.9

539—WARREN TO FIELD

Warren to Field	Bituminous prime	17.7
Deer Creek	Bridge	Under construction
3.5m N. of Hwy. 17	Grading, culverts, crushed gravel and stone, granular base	1.89
0.3m N. of Hwy. 17 northerly	As above	2.00
Warren to Field (Including 539A)	Crushed gravel and stone	25.6

540—LITTLE CURRENT TO MELDRUM BAY

Hwy. 542 westerly	Bituminous prime	19.6
26m westerly to Silverwater	Bituminous prime	1.0
2m E. of Hwy. 551 easterly	Bituminous prime	0.3
3.15m E. of Hwy. 551 easterly	Bituminous prime	0.3
(540A) Hwy. 540 westerly	Bituminous prime	
(540B) Hwy. 540 northerly	Bituminous prime	1.2
Bridal Veil Falls	Grading, culverts, granular base	1.0
19.5m W. of Hwy. 542 westerly	Grading, culverts, granular base	3.90
0.92m S. of 540A	Granular base	0.5
15.0m S. of Little Current	Granular base	0.2

541—SUDBURY TO SKEAD

0.25m E. of jct. 545 easterly	Grading, culverts, granular base, pavement	1.39
Sudbury N. limits northerly	As above	3.80

542—HIGHWAY 68 TO JCT. SEC. HIGHWAY 540

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 68 westerly	Bituminous prime	15.5
(542A)	Bituminous prime	1.4
Hwy. 68 northerly	Crushed gravel and stone	1.20
Spring Bay	Granular base	.75
3.8m E. of Hwy. 551 easterly	Granular base	1.2
Hwy. 68 northerly	Granular base	4.70

543—SUDBURY TO END OF HIGHWAY

Sudbury S. limits southerly	Crushed gravel and stone, granular base, pavement	4.70 (completed)
-----------------------------	--	------------------

546—IRON BRIDGE TO MOUNT LAKE

Hwy. 554 northerly	Grading, culverts, crushed gravel and stone, granular base	Completed
13.8m N. of Hwy. 554 northerly	Grading, culverts, granular base	Completed

548—ST. JOSEPH ISLAND

2.3m E. of Richards Landing easterly	Grading, culverts, granular base, bituminous prime and surface treatment	Completed
Richards Landing N. 0.2m from Hilton Beach N. 2.5m	Grading, culverts, bituminous surface treatment	Completed
4.4m W. of Richards Landing southerly	Grading, culverts, granular base	1.0
8.4m S. of Richards Landing southerly	Granular base	9.0

549—LAKE PANACHE TO HIGHWAY 17

Hwy. 17 to Lake Panache	Bituminous prime	9.0
-------------------------	------------------	-----

551—PUBLIC WHARF TO EXCELSIOR

Hwy. 542 to jct. Hwy. 40	Bituminous prime	7.0
From 2.8m N. of Hwy. 542 northerly	Granular base	2.02 (completed)

554—HIGHWAY 129 TO SEC. HIGHWAY 546

Hwy. 546 northerly	Crushed gravel and stone	1.0
2.6m N. of Hwy. 546 northerly	As above	1.0
Hwy. 546 northerly	Grading, culverts, granular base	1.0 (completed)
1.01m W. of Hwy. 546 westerly	Grading, culverts, granular base	1.60 (completed)

556—HEYDEN TO CHRISTINA MINE ROAD

Searchmont northerly	Grading, culverts, granular base	1.70 (completed)
----------------------	----------------------------------	------------------

558—HAILEYBURY TO MONTREAL RIVER

Location	Type of Work	Miles or jobs completed this fiscal year
Haileybury to Montreal River	Crushed gravel and stone	13.40

560—ENGLEHART TO GOGAMA

Englehart to Gogama	Crushed stone and gravel	13.40
6.5m N. of Elk Lake westerly	Grading, culverts, granular base	2.50 (completed)

561—BRUCE MINES TO HIGHWAY 638

3.3m N. of Bruce Mines northerly and from 5.5m N.	Crushed gravel and stone	2.50
3.3m N. of Hwy. 17 northerly	Grading, culverts, crushed gravel and stone, granular base	Partially completed
4.8m N. of Hwy. 17 northerly	Grading, culverts, granular base	Partially completed

564—HIGHWAY 112 TO END OF HIGHWAY

Hwy. 112 easterly	Crushed gravel and stone	9.80
-------------------	--------------------------	------

566—MATACHEWAN TO END OF HIGHWAY

Matachewan westerly	Crushed gravel and stone	16.60
---------------------	--------------------------	-------

567—NORTH COBALT TO SILVER CENTRE

Jct. 11B southerly	Crushed gravel and stone	17.00
--------------------	--------------------------	-------

568—HIGHWAY 11 TO KENOGAMI

Jct. Hwy. 11 easterly	Crushed gravel and stone	1.0
-----------------------	--------------------------	-----

572—HIGHWAY 11 TO HIGHWAY 101

Hwy. 101 southerly	Granular base	5 (completed)
--------------------	---------------	---------------

574—NOREMBEGA TO COCHRANE

Brower to Norembega	Crushed gravel and stone, bituminous prime	7.80
Cochrane easterly	Bituminous surface treatment	6.40
4.2m E. of Cochrane	Bridge	Completed
Cochrane to Norembega	Crushed gravel and stone	18

577—SHILLINGTON TO HIGHWAY 67

Monteith northerly	Crushed gravel and stone	7.50
Ansonville to Monteith to Shillington	As above	16
Jct. Hwys. 11 and 577 southerly	Granular base	1.50 (completed)

578—IROQUOIS FALLS TO HIGHWAY 11

Location	Type of Work	Miles or jobs complete this fiscal year
Jct. Hwys. 11 and 578 easterly	Bituminous prime	4.3 (Partially completed)
Hwy. 11 to Montrock	Crushed gravel and stone	6

579—COCHRANE TO GARDINER

Cochrane to Gardiner	Crushed gravel and stone	22
----------------------	--------------------------	----

583—MEAD LAKE TO STE. THERESE

Mattawishkwia River Bridge southerly	Crushed gravel and stone	22.80
Hearst to Mead	As above	23
Hearst southerly	Granular base	4 (completed)

584—HARDROCK MINES TO NAKINA

Jct. Hwy. 11 northerly	Crushed gravel and stone, granular base, pavement	Partially completed
Geraldton to Nakina	Grading, culverts, crushed gravel and stone	Partially completed

585—NIPIGON TO PINE PORTAGE

Hwy. 17 northerly	Bituminous prime	22.9
Nipigon to Pine Portage	Crushed gravel and stone	22

587—HIGHWAYS 11 AND 17 TO SILVER ISLET

Hwy. 17 easterly	Crushed gravel and stone, bituminous prime	26
------------------	--	----

588—STANLEY TO ROUND LAKE ROAD

0.2m E. of jct. Hwy. 590 to 4m W. of Hwy. 593	Bituminous prime	10.4
Jct. Hwy. 17 southerly	As above	2.3
2.3m S. of jct. Hwys. 11 and 17 southerly	Bituminous surface treatment	7.3
Hwy. 17 to Round Lake	Crushed gravel and stone	34

589—HIGHWAYS 11A AND 17A TO END OF HIGHWAY

Jct. 11A and 17A northerly	Bituminous prime	18.7
Hwy. 17A to end of Hwy.	Crushed gravel and stone	19

590—HIGHWAY 130 TO HIGHWAY 588

Jct. Hwy. 588 northerly	Bituminous prime	7.0
Jct. Hwy. 130 to Kakabeka	As above	10.3
Jct. Hwy. 130 to Nolalu	Crushed gravel and stone	26

591—HIGHWAY 589 TO END OF HIGHWAY

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 589 westerly	Bituminous prime	4.9

593—HIGHWAY 61 TO SILVER MOUNTAIN

Hwy. 61 westerly	Bituminous prime	5.4
------------------	------------------	-----

595—SEC. HIGHWAY 597 TO SEC. HIGHWAY 599

Hwy. 590 to jct. Hwy. 597	Crushed gravel and stone	25
---------------------------	--------------------------	----

597—TOWNSHIP ROAD TO SEC. HIGHWAY 608

Hwy. 608 to jct. Hwy. 595	Crushed gravel and stone	7
---------------------------	--------------------------	---

599—HIGHWAY 17 TO HIGHWAY 646

Ignace northerly	Crushed gravel and stone	165
English River Crossing northerly	Bituminous prime	13.3
Hwy. 17 northerly	Bituminous surface treatment	20.7

600—HIGHWAY 71 TO RAINY RIVER

Rainy River N. and E. to jct Hwy. 71 (sections)	Crushed gravel and stone	5.9
---	--------------------------	-----

601—HIGHWAY 17 TO DRYDEN

Jct. Hwy. 17 (east leg) to jct. Hwy. 17 (west leg)	Crushed gravel and stone	16.01
Jct. Hwy. 17 northerly	Granular base	3.10 (completed)

602—FORT FRANCES TO EMO

Jct. Hwy. 71 southerly	Bituminous prime	5 (completed)
McIrvine Rd. westerly	Resurfacing	1.27 (completed)
West limits Fort Frances westerly (sections)	Crushed gravel and stone	30.8

603—HIGHWAY 17 TO DYMENT

Jct. Hwy. 17 northerly (sections)	Crushed gravel and stone	2.80
0.20m N. of jct. Hwy. 17	Granular base	1.10

604—KENORA TO KENORA AIRPORT

Kenora east limits north-easterly (sections)	Crushed gravel and stone	5.20
--	--------------------------	------

605—HIGHWAY 17 TO END OF HIGHWAY

Jct. Hwy. 17 northerly (sections)	Crushed gravel and stone	7.70
-----------------------------------	--------------------------	------

607 AND 607A—HIGHWAY 64 TO HIGHWAY 69

Location	Type of Work	Miles or jobs completed this fiscal year
1 m s. Hwy. 64 to Hwy. 69	Bituminous prime	8.3
French River to jct. Hwy. 69	Crushed gravel and stone	7.4

608—HIGHWAY 61 TO SEC. HIGHWAY 595

Hwy. 61 to jct. Hwy. 597	Bituminous prime	5.3
Hwy. 61 to South Gillies	Crushed gravel and stone	12

609—HIGHWAY 105 TO END OF HIGHWAY

Jct. Hwy. 105 northerly (sections)	Crushed gravel and stone	9.80
------------------------------------	--------------------------	------

611—SEC. HIGHWAY 602 TO END OF HIGHWAY

Jct. Hwy. 105 northerly	Crushed stone and gravel	12.5
-------------------------	--------------------------	------

613—BIG FORK TO END OF HIGHWAY

Jct. Hwy. 602 northerly (sections)	Crushed gravel and stone	25.4
Lake Despair southerly	Grading, culverts, granular base	4.60 (completed)

614—HIGHWAY 17 TO MANITOUWADGE

18.5m S. of Manitouwadge southerly	Grading, culverts	Partially completed
------------------------------------	-------------------	---------------------

615—HIGHWAY 71 TO END OF HIGHWAY

Jct. Hwy. 71 northeasterly to Clearwater Lake	Bituminous prime, crushed gravel and stone	Completed
---	--	-----------

617—HIGHWAY 11 TO SEC. HIGHWAY 600

Jct. Hwy. 11 to jct. Hwy. 600 (sections)	Crushed gravel and stone	14.4
--	--------------------------	------

618—HIGHWAY 105 TO STARRAT OLSEN

Jct. Hwy. 105 westerly (sections)	Crushed gravel and stone	7.20
-----------------------------------	--------------------------	------

619—HIGHWAY 11 TO SEC. HIGHWAY 621

Jct. Hwy. 11 northerly (sections)	Crushed gravel and stone	25.5
-----------------------------------	--------------------------	------

620—HIGHWAY 62 TO HIGHWAY 28

Hwy. 62 westerly	Granular base, pavement	0.33 (completed)
------------------	-------------------------	------------------

621—HIGHWAY 11 TO END OF HIGHWAY

16.5m N. of Sleeman northerly	Granular base	6
-------------------------------	---------------	---

624—HIGHWAYS 11 AND 569 TO LARDER LAKE

Location	Type of Work	Miles or jobs completed this fiscal year
1.1m S. of jct. Hwy 66 southerly	Bituminous surface treatment	5.9
Blanche River	Crushed gravel and stone, bridge	Completed
Hwy. 66 southerly (sections)	Crushed gravel and stone	27

625—CARAMAT TO HIGHWAY 11

Jct. Hwy. 11 to Caramat	Crushed gravel and stone	20
-------------------------	--------------------------	----

626—MATHESON TO PORQUIS JUNCTION

Intersection Hwys. 67 and 62 southerly	Bituminous surface treatment	7
Matheson northerly	Granular base, crushed stone and gravel	Completed

629—TIMMINS TO TIMMINS AIRPORT

Timmins northerly to airport	Granular base	Partially completed
------------------------------	---------------	---------------------

630—KIOSK TO HIGHWAY 17

9m S. of Hwy 17 southerly	Bituminous prime	3.6
Kiosk to Hwy. 17	Crushed gravel and stone	18.1
5.1m N. of Kiosk northerly	Grading, culverts, granular base	0.75 (completed)

631—SHEKAK RIVER TO HIGHWAY 11

Jct. Hwy. 11 southerly	Crushed gravel and stone, bituminous prime, bituminous surface treatment	43
------------------------	--	----

638—DUNNS VALLEY TO ECHO BAY

Thessalon River Bridge easterly	Bituminous prime, bituminous surface treatment	1
5.3m E. of Hwy. 17 easterly	Granular base	11.50 (completed)

639—HIGHWAY 108 TO HIGHWAY 129

Jct. Hwy. 108 to jct. Hwy. 546	Bituminous prime	14.4
--------------------------------	------------------	------

641—HIGHWAY 17 TO PELLATT

Jct. Hwy. 17 northerly (sections)	Crushed gravel and stone	8.4
-----------------------------------	--------------------------	-----

642—ALCONA TO HIGHWAY 72

First Street in Sioux Lookout easterly (sections)	Crushed gravel and stone	11.50
---	--------------------------	-------

644—HIGHWAY 69 TO END OF HIGHWAY

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 69 westerly	Bituminous prime	2.5

645—BYNG INLET TO HIGHWAY 529

Hwy. 529 westerly	Bituminous prime	2.5
-------------------	------------------	-----

647—VERMILION BAY TO BLUE LAKE PROVINCIAL PARK

Jct. Hwy. 17 northwesterly (sections)	Crushed gravel and stone	5.30
2.9m N. of jct. Hwy. 17 to 4m N.	Grading, culverts, granular base	Partially completed

648—DYNO MINES TO WEST JCT. HIGHWAY 121

Centre jct. of Hwy. 121 southerly	Bituminous surface treatment	3.2
-----------------------------------	------------------------------	-----

651—HIGHWAY 101 TO MISSANABIE

Dalton to Missanabie (sections)	Granular base	14.80
---------------------------------	---------------	-------

654—HIGHWAY 11 TO SEC. HIGHWAY 534

Hwy. 11 to jct. Hwy. 534	Crushed gravel and stone	14.2
--------------------------	--------------------------	------

657—HIGHWAY 105 TO GOVERNMENT DOCKS

Jct. Hwy. 105 N. of Ear Falls easterly (sections)	Crushed gravel and stone	3.70
---	--------------------------	------

659—SEC. HIGHWAY 604 TO HIGHWAY 128

Jct. Hwy. 604 northwesterly (sections)	Crushed gravel and stone	11.30
Jct. Hwy. 128 southeasterly	Granular base	12.30 (completed)

660—HIGHWAY 69 TO HIGHWAY 103

Bala westerly	Bituminous prime	5.0
0.8m E. of Hwy. 103 easterly	Grading, culverts, crushed gravel and stone, granular base	4.05 (completed)

TERTIARY ROAD 804—HIGHWAY 105 TO LOWER MANITOU FALLS DAM

Jct. Hwy. 105 south of Ear Falls westerly (sections)	Crushed gravel and stone	13.2
--	--------------------------	------

TERTIARY ROAD 805—SEC. HIGHWAY 539A TO END OF HIGHWAY

End of Hwy. 539A northerly	Bituminous prime	0.7
13m N. of River Valley northerly	Crushed gravel and stone	18
Hwy. 539 to end of Highway	Crushed gravel and stone	35

Appendices

Financial Branch

1. Department Expenditures on King's Highways, Secondary Highways, Tertiary, Access and Industrial Roads, Connecting Links, Development Roads, Roads in Unincorporated Townships by County and Territorial District	88
2. Development Road Expenditure in Municipalities by County and Territorial Districts	106
3. Department Expenditures by Highways	111

Operations Branch—Municipal Roads Office

4. Summary of County Road Expenditures	118
5. Mileage of Urban Road Surfaces—1969	120
6. Mileage of Rural Road Surfaces—1969	122
7. Road Mileages in Ontario—1969	124

Program Office

8. Summary of King's Highway Mileage by Highway Districts	124
9. Summary of Secondary Highway Mileage by Highway Districts	125
10. Summary of Tertiary Road Mileage by Highway Districts	125
11. Types of Surface on King's Highways	126
12. Types of Surface on Secondary Highways	127
13. Types of Surface on Tertiary Roads	127

Services Branch—Right-of-Way Office

14. Schedule of Controlled Access Highways	128
15. Schedule of Existing Roads Assumed as Portions of The King's Highway, Secondary Highway and Tertiary Road Systems	129
16. Schedule of Designations and Re-Designations of The King's Highway, Secondary Highway and Tertiary Road Systems	130
17. Schedule of Reversions and Transfers of sections of The King's and Secondary Highway Systems	133

APPENDIX No. 1

**Department Expenditures on King's Highways, Secondary Highways,
Tertiary Roads, Access and Industrial Roads, Connecting Links,
Development Roads, Roads in Unincorporated Townships,
by County and Territorial District**

April 1, 1969 to March 31, 1970

County	Construction	Maintenance	Total
Brant			
Highway 2	\$ 209,503	\$ 97,441	\$ 306,944
" 5	1,032	27,216	28,248
" 24	17,454	40,237	57,691
" 24A	5,280	47,354	52,634
" 53	27,496	49,675	77,171
" 54	4,817	54,594	59,411
" 99	12,785	14,689	27,474
" 403	8,271	39,294	47,565
Connecting Links:			
City of Brantford	90,279	—	90,279
Town of Paris	—	540	540
Development Roads	740,029	—	740,029
Other program:			
Brantford Expressway	576,427	—	576,427
Sidewalks	3,819	—	3,819
	<u>\$ 1,697,192</u>	<u>\$ 371,040</u>	<u>\$ 2,068,232</u>
Bruce			
Highway 4	\$ 1,042,175	\$ 90,453	\$ 1,132,628
" 6	933,747	151,365	1,085,112
" 9	181,743	102,541	284,284
" 21	63,426	188,773	252,199
" 86	3,013	50,440	53,453
Connecting Links:			
Town of Kincardine	—	3,299	3,299
Town of Port Elgin	—	2,464	2,464
Town of Southampton	—	3,012	3,012
Town of Walkerton	—	2,444	2,444
Town of Wiarton	—	942	942
Village of Lucknow	—	1,161	1,161
Village of Mildmay	3,576	358	3,934
Village of Teeswater	—	324	324
Development Roads	8,672	—	8,672
Ferries	—	75,000	75,000
Lands and Buildings	27,174	—	27,174
	<u>\$ 2,263,526</u>	<u>\$ 672,576</u>	<u>\$ 2,936,102</u>
Dufferin			
Highway 9	\$ 2,595	\$ 78,328	\$ 80,923
" 10	35,675	110,799	146,474
" 24	2,952	44,816	47,768
" 89	5,178	56,031	61,209
" 104	348	6,269	6,617
" 136	13	1,134	1,147
Connecting Links:			
Town of Orangeville	—	5,980	5,980
Village of Shelburne	—	1,258	1,258
Development Roads	803,332	—	803,332
Lands and Buildings	1,327	—	1,327
	<u>\$ 851,420</u>	<u>\$ 304,615</u>	<u>\$ 1,156,035</u>

County	Construction	Maintenance	Total
Elgin			
Highway 3	\$ 51,793	\$ 181,592	\$ 233,385
" 4	149,250	74,271	223,521
" 19	11,130	52,554	63,684
" 73	5,530	50,993	56,523
" 74	620	20,949	21,569
" 76	455	24,968	25,423
" 401 (M.-C.F.)	528,563	156,944	685,507
Connecting Links:			
Town of Alymer	—	4,385	4,385
Village of Belmont	—	1,524	1,524
Village of Port Burwell	—	1,125	1,125
Development Roads	1,124,388	—	1,124,388
Land and Buildings	537	—	537
	<u>\$ 1,872,266</u>	<u>\$ 569,305</u>	<u>\$ 2,441,571</u>
Essex			
Highway 2	\$ 13,023	\$ 58,279	\$ 71,302
" 3	777,233	75,319	852,552
" 48	107,214	92,641	199,855
" 18A	28,731	39,236	67,967
" 39	18,231	23,440	41,671
" 77	459,104	29,252	488,356
" 98	37,705	57,355	95,060
" 107	343	2,052	2,395
" 114	378	2,257	2,635
" 401 (M.-C.F.)	806,716	151,333	958,049
Other Program:			
E. C. Row Expressway (Windsor)	2,048,311	—	2,048,311
Connecting Links:			
City of Windsor	706,650	—	706,650
Town of Amherstburg	—	947	947
Town of Belle River	—	806	806
Town of Essex	—	609	609
Town of Harrow	—	319	319
Town of Kingsville	—	530	530
Town of Leamington	—	13,203	13,203
Town of Tilbury	2,769	—	2,769
Development Roads	82,795	—	82,795
Lands and Buildings	748	—	748
	<u>\$ 5,089,951</u>	<u>\$ 547,578</u>	<u>\$ 5,637,529</u>
Frontenac			
Highway 2	\$ 974,568	\$ 76,703	\$ 1,051,271
" 7	200,488	80,285	280,773
" 15	3,108	79,082	82,190
" 33	23,213	20,359	43,572
" 38	190,335	109,272	299,607
" 41	905,275	26,673	931,948
" 95	2,817	33,492	36,309
" 96	8,303	128,829	137,132
" 401 (M.-C.F.)	451,292	155,198	606,490
Sec. Hwy. 506	1,932	78,729	80,661
" 509	2,764	31,993	34,757
Connecting Link:			
City of Kingston	195,443	—	195,443
Ferries	11,413	458,606	470,019
Sidewalks	1,977	—	1,977
Development Roads	905,002	—	905,002
Lands and Buildings	40,206	—	40,206
	<u>\$ 3,918,136</u>	<u>\$ 1,279,221</u>	<u>\$ 5,197,357</u>

County	Construction	Maintenance	Total
Grey			
Highway 4	\$ 30,078	\$ 93,032	\$ 123,110
" 6	34,251	192,421	226,672
" 10	24,224	127,112	151,336
" 24	583	12,716	13,299
" 26	148,935	130,858	279,793
" 70	370	27,534	27,904
" 89	33,464	29,191	62,655
Connecting Links:			
City of Owen Sound	15,785	—	15,785
Town of Durham	—	1,057	1,057
Town of Hanover	Cr. 204	1,163	959
Town of Meaford	128,637	1,470	130,107
Town of Thornbury	136,662	104	136,766
Village of Chatsworth	—	821	821
Village of Flesherton	—	120	120
Village of Markdale	—	266	266
Lands and Buildings	225	2,223	2,448
Development Roads	312,425	—	312,425
Sidewalks	3,507	—	3,507
	\$ 868,942	\$ 620,088	\$ 1,489,030
Haldimand			
Highway 3	\$ 94,065	\$ 193,157	\$ 287,222
" 6	2,547	79,984	82,531
" 54	891	47,137	48,028
" 56	2,161	26,260	28,421
Connecting Links:			
Town of Caledonia	17,237	2,869	20,106
Town of Dunnville	—	3,282	3,282
Village of Cayuga	—	1,751	1,751
Village of Hagersville	—	1,737	1,737
Village of Jarvis	—	3,626	3,626
Development Roads	451,081	—	451,081
Lands and Buildings	2,342	—	2,342
	\$ 570,324	\$ 359,803	\$ 930,127
Halton			
Highway 2	\$ 217,180	\$ 82,518	\$ 299,698
" 5	9,778	105,466	115,244
" 6	—	7,794	7,794
" 7	120,979	49,211	170,190
" 25	18,640	94,467	113,107
" 122	428,513	27,267	455,780
" 401 (M.-C.F.)	90,149	159,246	249,395
" 403	49,088	113,432	162,520
Queen Elizabeth Way	2,726,151	269,498	2,995,649
Connecting Links:			
Town of Acton	—	5,089	5,089
Town of Burlington	145,118	—	145,118
Town of Georgetown	161,993	4,291	166,284
Town of Milton	29,847	2,531	32,378
Town of Oakville	102,179	—	102,179
	\$ 4,099,615	\$ 920,810	\$ 5,020,425
Hastings			
Highway 2	\$ 187,964	\$ 90,271	\$ 278,235
" 7	793,803	77,347	871,150
" 14	107,313	74,056	181,369
" 28	6,718	30,651	37,369
" 33	1,627	30,291	31,918
" 37	2,274	79,381	81,655
" 49	2,533	4,267	6,800
" 62	671,157	319,302	990,459
" 121	245	6,413	6,658
" 127	34,613	48,418	83,031
" 401 (M.-C.F.)	321,807	174,674	496,481

County	Construction	Maintenance	Total
Sec. Hwy. 500	38,510	77,428	115,938
" " 502	96	6,964	7,060
" " 504	13	579	592
" " 517	340	25,029	25,369
" " 620	6,992	42,016	49,008
Connecting Links:			
City of Belleville	313,823	—	313,823
Town of Deseronto	—	296	296
Town of Trenton	46,225	—	46,225
Village of Bancroft	235,514	9,869	245,383
Village of Frankford	147,949	78	148,027
Village of Madoc	9,909	93	10,002
Village of Marmora	—	378	378
Village of Stirling	—	287	287
Village of Tweed	—	308	308
Development Roads	1,341,926	—	1,341,926
Lands and Building	41,582	—	41,582
	<u>\$ 4,312,933</u>	<u>\$ 1,098,396</u>	<u>\$ 5,411,329</u>

Huron			
Highway 4	\$ 26,315	\$ 162,747	\$ 189,062
" 8	94,657	82,885	177,542
" 9	—	4,439	4,439
" 21	20,462	182,869	203,331
" 23	3,573	12,599	16,172
" 81	195,749	15,987	211,736
" 83	10,559	50,443	61,002
" 84	1,414	29,382	30,796
" 86	9,923	137,901	147,824
" 87	8,562	43,936	52,498
Connecting Links:			
Town of Clinton	25,543	1,545	27,088
Town of Exeter	180,831	1,313	182,144
Town of Goderich	2,918	7,770	10,688
Town of Seaforth	—	429	429
Town of Wingham	84,484	2,391	86,875
Lands and Buildings	4,330	1,619	5,949
Development Roads	409,718	—	409,718
Sidewalks	392	—	392
	<u>\$ 1,079,430</u>	<u>\$ 738,255</u>	<u>\$ 1,817,685</u>

Kent			
Highway 2	\$ 16,878	\$ 80,321	\$ 97,199
" 3	26,409	102,636	129,045
" 21	15,261	62,225	77,486
" 40	129,994	51,256	181,250
" 78	4,863	25,683	30,546
" 79	1,718	13,961	15,679
" 98	12,694	67,986	80,680
" 401 (M.-C.F.)	667,292	201,847	869,139
Connecting Links:			
City of Chatham	51,972	—	51,972
Town of Blenheim	473	505	978
Town of Bothwell	—	483	483
Town of Dresden	—	785	785
Town of Ridgetown	—	907	907
Town of Tilbury	2,769	111	2,880
Town of Wallaceburg	66	—	66
Village of Thamesville	—	282	282
Village of Wheatley	—	237	237
Lands and Buildings	3,769	—	3,769
Development Roads	81,139	—	81,139
Sidewalks	907	—	907
	<u>\$ 1,016,204</u>	<u>\$ 609,225</u>	<u>\$ 1,625,429</u>

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Lambton			
Highway 7	\$ 35,897	\$ 101,758	\$ 137,655
" 21	107,363	142,394	249,757
" 22	756	5,169	5,925
" 40	546,205	93,534	639,739
" 79	14,033	51,863	65,896
" 80	142,120	78,794	220,914
" 82	4,123	11,361	15,484
" 402	531,716	22,542	554,258
Connecting Links:			
City of Sarnia	749,280	—	749,280
Town of Forest	—	1,285	1,285
Village of Grand Bend	96,752	1,040	97,792
Village of Thedford	—	850	850
Village of Watford	—	725	725
Village of Wyoming	—	1,688	1,688
Development Roads	393,142	—	393,142
	\$ 2,621,387	\$ 513,003	\$ 3,134,390
Lanark			
Highway 7	\$ 125,215	\$ 165,889	\$ 291,104
" 15	680	58,025	58,705
" 29	129,126	69,842	198,968
" 43	2,366	68,193	70,559
" 44	89	7,276	7,365
Sec. Hwy. 511	2,408	50,142	52,550
Connecting Links:			
Town of Almonte	7,557	1,463	9,020
Town of Carleton Place	—	5,358	5,358
Town of Smiths Falls	233,744	—	233,744
Development Roads	723,971	14,136	738,107
Lands and Buildings	956	—	956
Weigh Scales	—	4,178	4,178
	\$ 1,226,112	\$ 444,502	\$ 1,670,614
Leeds and Grenville			
Highway 2	\$ 9,945	\$ 162,553	\$ 172,498
" 2S	19,569	95,791	115,360
" 15	7,711	115,202	122,913
" 16	32,441	64,327	96,768
" 29	32,974	62,825	95,799
" 32	1,126	38,383	39,509
" 42	441,296	77,733	518,669
" 43	1,938	50,658	52,596
" 137	1,720	13,042	14,762
" 401 (M.-C.F.)	723,763	371,557	1,095,320
" 416	659,427	—	659,427
Connecting Links:			
Town of Kemptville	—	153	153
Village of Athens	—	328	328
Village of Merrickville	—	891	891
Village of Westport	—	3,451	3,451
Development Roads	811,455	—	811,455
Weigh Scales	718	4,033	4,751
	\$ 2,744,083	\$ 1,060,567	\$ 3,804,650
Lennox and Addington			
Highway 2	\$ 2,438	\$ 76,571	\$ 79,009
" 7	803	28,734	29,537
" 33	8,447	231,566	240,013
" 41	513,494	182,971	696,465
" 133	197	18,287	18,484
" 401 (M.-C.F.)	1,449	154,404	155,853
Sec. Hwy. 500	—	17,901	17,901
" 502	6,591	14,290	20,881

County	Construction	Maintenance	Total
Connecting Link:			
Village of Bath	—	286	286
Development Roads	729,720	—	729,720
Lands and Buildings.	64	21,511	21,575
Ferries	—	140,683	140,683
	<u>\$ 1,263,203</u>	<u>\$ 887,204</u>	<u>\$ 2,150,407</u>
Middlesex			
Highway 2	\$ 124,821	\$ 254,160	\$ 378,981
" 4	394,712	93,297	488,009
" 7	302,279	114,000	416,279
" 22	6,501	191,895	198,396
" 23	1,421	21,010	22,431
" 73	632	15,933	16,565
" 74	2,587	18,176	20,763
" 76	—	3,342	3,342
" 80	915	24,624	25,539
" 81	474,739	90,491	565,230
" 126	15,980	23,805	39,785
" 135	457	10,857	11,314
" 401 (M.-C.F.)	189,738	207,826	397,564
Connecting Links:			
City of London	76,824	—	76,824
Town of Parkhill	—	774	774
Town of Strathroy	—	162	162
Village of Glencoe	29,664	120	29,784
Village of Lucan	—	1,899	1,899
Development Roads	24,242	—	24,242
Lands and Buildings.	2,961	15,300	18,261
	<u>\$ 1,648,473</u>	<u>\$ 1,087,671</u>	<u>\$ 2,736,144</u>
Niagara			
Highway 3	\$ 1,337,379	\$ 197,074	\$ 1,534,453
" 3A	1,455	40,165	41,620
" 3C	141	36,685	36,826
" 8	25,454	153,146	178,600
" 8A	3,350	16,110	19,460
" 20	11,584	189,498	201,082
" 57	495	36,666	37,161
" 58	1,361,862	189,743	1,551,605
" 140	29,399	—	29,399
" 405	251,655	66,107	317,762
" 406	3,303,268	38,155	3,341,423
Queen Elizabeth Way	8,004,960	1,039,979	9,044,939
Other Programs:			
Main St. East Tunnel (Welland)	582,425	—	582,425
Niagara Freeway	6,724	—	6,724
Thorold Tunnel	375,205	—	375,205
Carleton St. Tunnel (St. Catharines)	3,781	—	3,781
Connecting Links:			
City of Niagara Falls	143,182	—	143,182
City of Port Colborne.	119,068	Cr. 861	118,207
City of Welland	34,953	—	34,953
Town of Lincoln	—	1,133	1,133
Town of Fort Erie	—	4,488	4,488
Town of Grimsby	—	1,135	1,135
Development Roads	278,051	—	278,051
Sidewalks.	6,454	—	6,454
	<u>\$15,880,845</u>	<u>\$ 2,009,223</u>	<u>\$17,890,068</u>
Norfolk			
Highway 3	\$ 11,332	\$ 96,667	\$ 107,999
" 6	464,877	21,019	485,896
" 19	23,288	8,508	31,796
" 24	1,284,168	95,086	1,379,254
" 59	180,885	87,224	268,109

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Connecting Links:			
Town of Delhi	—	1,090	1,090
Pown of Port Dover	Cr. 408	1,615	1,207
Town of Simcoe	—	1,951	1,951
Development Roads	621,490	—	621,490
	\$ 2,585,632	\$ 313,160	\$ 2,898,792
Northumberland and Durham			
Highway 2	\$ 440,923	\$ 296,735	\$ 737,658
" 7	50	5,925	5,975
" 7A	44,245	79,710	123,955
" 28	2,978	111,359	114,337
" 30	25,661	85,813	111,474
" 33	61,875	19,524	81,399
" 35	19,430	98,013	117,443
" 45	16,785	85,641	102,426
" 106	99	10,770	10,869
" 115	11,350	71,279	82,629
" 401 (M.-C.F.)	148,137	597,053	745,190
Connecting Links:			
Town of Bowmanville	2,392	1,233	3,625
Town of Campbellford	5,113	868	5,981
Town of Cobourg	66,043	2,579	68,622
Town of Port Hope	184	4,936	5,120
Village of Brighton	—	2,727	2,727
Village of Colborne	—	800	800
Village of Hastings	—	522	522
Village of Newcastle	—	1,025	1,025
Development Roads	364,929	—	364,929
Sidewalks	1,027	—	1,027
	\$ 1,211,221	\$ 1,476,512	\$ 2,687,733
Ontario			
Highway 2	\$ 206,986	\$ 100,260	\$ 307,246
" 7	20,024	253,772	273,796
" 7A	3,865	33,397	37,262
" 12	152,410	211,471	363,881
" 47	860,764	92,931	953,695
" 48	551,336	146,519	697,855
" 69	734	89,772	90,506
" 401 (M.-C.F.)	5,003	282,444	287,447
Sec. Hwy. 503	69	3,518	3,587
Connecting Links:			
City of Oshawa	118,512	—	118,512
Town of Uxbridge	13,641	1,540	15,181
Town of Whitby	19,858	10,013	29,871
Village of Beaverton	18,219	1,547	19,766
Development Roads	182,078	—	182,078
Lands and Buildings	—	763	763
Sidewalks	14,045	—	14,045
	\$ 2,167,544	\$ 1,227,947	\$ 3,395,491
Ottawa-Carleton			
Highway 7	\$ 427,843	\$ 72,804	\$ 500,647
" 16	234,936	93,558	328,494
" 17	370,070	224,006	594,076
" 29	124	18,484	18,608
" 31	8,902	76,898	85,800
" 44	565	23,328	23,893
" 416	546,621	—	546,621
" 417	3,521,765	—	3,521,765
Other Program:			
Ottawa-Queensway	8,712	126,349	135,061
Connecting Link:			
City of Ottawa	186,237	—	186,237
Development Roads	94,761	20,344	115,105
Lands and Buildings	2,814	—	2,814
Sidewalks	1,213	—	1,213
	\$ 5,404,563	\$ 655,771	\$ 6,060,334

County	Construction	Maintenance	Total
Oxford			
Highway 2	\$ 12,249	\$ 95,430	\$ 107,679
" 3	92,443	8,477	100,920
" 7	30,588	2,592	33,180
" 19	34,723	94,899	129,622
" 53	357	14,834	15,191
" 59	15,358	110,207	125,565
" 97	11,786	61,928	73,714
" 401 (M.-C.F.)	70,283	264,177	334,460
Connecting Links:			
City of Woodstock	155	—	155
Town of Ingersoll	35,481	—	35,481
Town of Tillsonburg	—	108	108
Village of Norwich	—	2,043	2,043
Village of Tavistock	—	2,035	2,035
Sidewalks	1,927	—	1,927
	<u>\$ 305,350</u>	<u>\$ 656,730</u>	<u>\$ 962,080</u>
Peel			
Highway 2	\$ 58,756	\$ 76,919	\$ 135,675
" 5	71,427	106,809	178,236
" 7	644,195	74,857	719,052
" 9	431	42,645	43,076
" 10	2,068,728	267,062	2,335,790
" 24	164	40,333	40,497
" 50	226,146	89,683	315,829
" 122	93,288	27,398	120,686
" 136	224	39,929	40,153
" 401 (M.-C.F.)	283,757	136,954	420,711
" 403	121,526	—	121,526
Queen Elizabeth Way	5,570	143,354	148,924
Other Program:			
Belfield Expressway	322,767	—	322,767
Connecting Links:			
Town of Brampton	139,784	13,740	153,524
Town of Port Credit	31,549	11,911	43,460
Village of Bolton	—	1,599	1,599
Development Roads	1,077	—	1,077
Lands and Buildings	—	763	763
	<u>\$ 4,069,389</u>	<u>\$ 1,073,956</u>	<u>\$ 5,143,345</u>
Perth			
Highway 7	\$ 186,618	\$ 108,812	\$ 295,430
" 8	21,016	68,490	89,506
" 19	17,137	75,713	92,850
" 23	717,959	138,193	856,152
" 59	615	11,853	12,468
" 83	445	6,971	7,416
" 86	3,724	38,497	42,221
Connecting Links:			
Town of Listowel	2,085	11,760	13,845
Town of Mitchell	99,987	2,592	102,579
Town of St. Marys	63,900	—	63,900
Village of Milverton	42,182	165	42,347
Lands and Buildings	4,151	—	4,151
	<u>\$ 1,159,819</u>	<u>\$ 463,046</u>	<u>\$ 1,622,865</u>
Peterborough			
Highway 7	\$ 120,728	\$ 161,227	\$ 281,955
" 28	90,765	176,673	267,438
" 30	7,517	8,710	16,227
" 36	572,404	82,214	654,618
" 45	10,264	14,883	25,147
" 115	23	2,735	2,758
" 121	57	3,789	3,846

County	Construction	Maintenance	Total
Sec. Hwy. 503	573	8,587	9,160
" " 504	1,628	46,503	48,131
" " 507	86,947	97,339	184,286
" " 620	75,606	39,046	114,652
" " 620A	—	868	868
" " 649	202	13,126	13,328
Connecting Links:			
Village of Havelock	—	934	934
Village of Lakefield	—	675	675
Village of Norwood	—	415	415
Development Roads	826,434	—	826,434
Lands and Buildings	2,310	—	2,310
Sidewalks	1,386	—	1,386
	<u>\$ 1,796,844</u>	<u>\$ 657,724</u>	<u>\$ 2,454,568</u>
Prescott and Russell			
Highway 17	\$ 23,271	\$ 588,823	\$ 612,094
" 34	208	57,101	57,309
" 417	69,082	—	69,082
Connecting Links:			
Town of Rockland	45,698	3,509	49,207
Town of Vankleek Hill	6,197	884	7,081
Development Roads	1,621,120	—	1,621,120
Sidewalks	7,066	—	7,066
Weigh Scales	—	1,453	1,453
	<u>\$ 1,772,642</u>	<u>\$ 651,770</u>	<u>\$ 2,424,412</u>
Prince Edward			
Highway 14	\$ 6,102	\$ 52,614	\$ 58,716
" 33	43,709	113,661	157,370
" 49	957,663	40,414	998,077
Connecting Links:			
Town of Picton	21,551	162	21,713
Village of Bloomfield	—	1,608	1,608
Village of Wellington	—	597	597
Development Roads	396,011	—	396,011
Ferries	—	136,575	136,575
	<u>\$ 1,425,036</u>	<u>\$ 345,631</u>	<u>\$ 1,770,667</u>
Renfrew			
Highway 17	\$ 2,115,198	\$ 438,333	\$ 2,553,531
" 29	31	4,845	4,876
" 41	185,232	182,732	367,964
" 60	6,252	205,530	211,782
" 62	15,908	182,741	198,649
" 132	2,612	60,209	62,821
Sec. Hwy. 500	117,188	39,083	156,271
" " 508	2,682	73,632	76,314
" " 511	2,577	26,510	29,087
" " 512	2,846	93,809	96,655
" " 513	—	39,097	39,097
" " 515	106,047	106,750	212,797
" " 517	286	20,431	20,717
" " 635	—	5,066	5,066
" " 653	200	19,842	20,042
Connecting Links:			
Town of Pembroke	4,137	13,447	17,584
Town of Renfrew	—	11,931	11,931
Village of Barry's Bay	—	2,244	2,244
Village of Eganville	—	1,400	1,400
Development Roads	709,217	—	709,217
Lands and Buildings	30	—	30
Weigh Scales	—	1,229	1,229
	<u>\$ 3,270,443</u>	<u>\$ 1,528,861</u>	<u>\$ 4,799,304</u>

County	Construction	Maintenance	Total
Simcoe			
Highway 9	\$ 4,189	\$ 21,848	\$ 26,037
" 11	137,503	395,833	533,336
" 12	58	153,347	153,405
" 24	274,376	57,942	332,318
" 26	189,645	154,017	343,662
" 27	61,748	228,788	290,536
" 69	8,000	2,378	10,378
" 88	342	22,427	22,769
" 89	7,035	76,847	83,882
" 90	3,103	51,473	54,576
" 91	998	17,056	18,054
" 92	218	36,512	36,730
" 93	1,667	71,527	73,194
" 103	10,860	24,000	34,860
" 400	76,087	399,020	475,107
Connecting Links:			
City of Barrie	4	—	4
City of Orillia	Cr. 319	557	238
Town of Alliston	1,010	4,031	5,041
Town of Bradford	—	12,103	12,103
Town of Collingwood	179,285	4,308	183,593
Town of Midland	162,506	3,108	165,614
Town of Penetanguishene	38,251	4,029	42,280
Town of Stayner	—	878	878
Village of Coldwater	—	1,802	1,802
Village of Cookstown	—	4,538	4,538
Village of Elmvale	346	3,057	3,403
Village of Port McNicoll	—	1,423	1,423
Village of Victoria Harbour	—	3,485	3,485
Village of Wasaga Beach	21,485	1,068	22,553
Development Roads	127,301	—	127,301
Lands and Buildings	1,640	—	1,640
	\$ 1,307,338	\$ 1,757,402	\$ 3,064,740
Stormont, Dundas and Glengarry			
Highway 2	\$ 23,513	\$ 155,948	\$ 179,461
" 31	7,440	79,085	86,525
" 34	19,531	90,596	110,127
" 43	212,892	178,012	390,904
" 138	847,407	39,542	886,949
" 401 (M.-C.F.)	490,534	516,262	1,006,796
" 417	50	—	50
Connecting Links:			
City of Cornwall	146,218	—	146,218
Town of Alexandria	—	12,884	12,884
Village of Chesterville	—	3,417	3,417
Village of Winchester	—	530	530
Development Roads	618,417	—	618,417
Lands and Buildings	4,828	—	4,828
Weigh Scales	—	1,658	1,658
Sidewalks	5,944	—	5,944
	\$ 2,376,774	\$ 1,077,934	\$ 3,454,708
Victoria			
Highway 7	\$ 110,149	\$ 105,789	\$ 215,938
" 35	181,025	127,045	308,070
" 35A	77	4,993	5,070
" 36	891	54,752	55,643
" 46	38,603	67,476	106,079
" 48	75	12,386	12,461
" 121	2,215	62,634	64,849
Sec. Hwy. 503	70,521	137,401	207,922
" 505	2,109	29,191	31,300
" 649	221	14,462	14,683

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Connecting Links:			
Town of Lindsay	72,401	6,964	79,365
Village of Bobcaygeon	—	1,866	1,866
Village of Fenelon Falls	—	1,184	1,184
Village of Omeme	—	854	854
Village of Woodville	2,980	751	3,731
Development Roads	653,696	—	653,696
	<u>\$ 1,134,963</u>	<u>\$ 627,748</u>	<u>\$ 1,762,711</u>
Waterloo			
Highway 7	\$ 33,346	\$ 112,314	\$ 145,660
" 8	6,877,837	90,196	6,968,033
" 24	35,281	17,308	52,589
" 24A	170	19,377	19,547
" 85	2,194	25,495	27,689
" 86	39,356	47,316	86,672
" 97	2,013	56,799	58,812
" 401 (M.-C.F.)	22,313	130,031	152,344
Connecting Links:			
City of Galt	428,100	12,886	440,986
City of Kitchener	—	331	331
City of Waterloo	78,735	—	78,735
Town of Elmira	—	1,128	1,128
Town of Hespeler	—	3,220	3,220
Town of New Hamburg	169,661	183	169,844
Town of Preston	21,975	32,711	54,686
Lands and Buildings	1,585	—	1,585
	<u>\$ 7,712,566</u>	<u>\$ 549,295</u>	<u>\$ 8,261,861</u>
Wellington			
Highway 6	\$ 527,719	\$ 169,961	\$ 697,680
" 7	7,622	47,260	54,882
" 9	631,767	104,172	735,939
" 23	243	5,580	5,823
" 24	7,497	88,494	95,991
" 25	2,225	20,951	23,176
" 86	35,193	41,248	76,441
" 87	1,021	14,528	15,549
" 89	581,610	56,872	638,482
" 401 (M.-C.F.)	12,202	123,265	135,467
Connecting Links:			
City of Guelph	82,317	330	82,647
Town of Fergus	152,892	707	153,599
Town of Harriston	317,297	1,828	319,125
Town of Mount Forest	172,759	2,109	174,868
Town of Palmerston	—	914	914
Village of Arthur	—	512	512
Village of Clifford	—	1,380	1,380
Village of Erin	1,151	1,253	2,404
Development Roads	1,669,799	—	1,669,799
Lands and Buildings	4,911	—	4,911
	<u>\$ 4,208,225</u>	<u>\$ 681,364</u>	<u>\$ 4,889,589</u>
Wentworth			
Highway 2	\$ 130,245	\$ 74,109	\$ 204,354
" 5	10,391	89,713	100,104
" 6	1,061,135	110,456	1,171,591
" 8	69,793	103,134	172,927
" 20	1,478	46,549	48,027
" 52	746	66,933	67,679
" 53	428	30,405	30,833
" 56	1,597	40,267	41,864
" 97	6,525	52,100	58,625
" 99	20,297	56,617	76,914
" 403	2,024,165	146,078	2,170,243
Queen Elizabeth Way	4,268,432	168,851	4,437,283

County	Construction	Maintenance	Total
Connecting Links:			
City of Hamilton	3,165,004	135,004	3,300,008
Town of Dundas	49,583	3,882	53,465
Town of Stoney Creek	—	3,087	3,087
Sidewalks.	2,915	—	2,915
	<u>\$10,812,734</u>	<u>\$ 1,127,185</u>	<u>\$11,939,919</u>
York			
Highway 2A	\$ 148,080	\$ 22,142	\$ 170,222
" 5	471,407	6,924	478,331
" 7	1,498,831	251,367	1,750,198
" 9	1,052,918	77,934	1,130,852
" 11	683,556	228,572	912,128
" 27	17,228,646	389,121	17,617,767
" 47	480	21,414	21,894
" 48	76,651	203,943	280,594
" 50	9,271	22,520	31,791
" 117	42	8,333	8,375
" 400	1,264,813	943,351	2,208,164
" 401 (M.-C.F.)	23,130,684	1,514,212	24,644,896
" 404	35,395	—	35,395
" 407	702,973	—	702,973
" 427	925	—	925
Queen Elizabeth Way	2,047,333	160,149	2,207,482
Other Programs:			
International Airport Road	88	19,648	19,736
Belfield Expressway	309,374	—	309,374
Connecting Links:			
Town of Aurora	222,205	2,829	225,034
Town of Markham	—	5,457	5,457
Town of Richmond Hill	23,942	5,222	29,164
Village of Stouffville	—	5,266	5,266
Lands and Buildings.	165,651	1,526	167,177
Sidewalks.	17,349	—	17,349
	<u>\$49,090,614</u>	<u>\$ 3,889,930</u>	<u>\$52,980,544</u>
Algoma			
Highway 17	\$ 4,061,926	\$ 909,171	\$ 4,971,097
" 101	6,355	102,606	108,961
" 108	155,714	60,388	216,102
" 129	255,955	268,216	524,171
Sec. Hwy. 538	—	10,689	10,689
" 546	54,861	107,830	162,691
" 547	—	7,588	7,588
" 548	56,042	143,487	199,529
" 550	34,199	16,297	50,496
" 552	—	33,075	33,075
" 552A	—	2,177	2,177
" 553	2,801	95,460	98,261
" 554	82,940	25,358	108,298
" 555	2,627	18,502	21,129
" 556	81,289	101,653	182,942
" 557	41	32,988	33,029
" 561	75,123	29,458	104,581
" 563	—	6,788	6,788
" 565	—	2,507	2,507
" 631	1,137,411	210,622	1,348,033
" 638	38,438	53,192	91,630
" 639	4,910	44,347	49,257
" 651	165,472	63,722	229,194
Access Roads:			
Panel Mine Road	—	334	334
Denison Mine Road	—	78	78
Stanrock Mine Road	—	405	405
Algoma-Nordic Mine Road	—	360	360

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Connecting Links:			
Township of Michipicoten	—	1,163	1,163
City of Sault Ste Marie	30,848	—	30,848
Town of Blind River	—	1,756	1,756
Town of Thessalon	—	2,514	2,514
Unincorporated Township Roads:			
Local Roads Board	34,241	61,070	95,311
Statute Labour Board	28,014	28,074	56,088
Special-Settlers	—	558	558
Indian Reserves	—	452	452
Lands and Buildings	28,919	—	28,919
Ferries	2,902	185,643	188,545
	\$ 6,341,028	\$ 2,628,528	\$ 8,969,556
Cochrane			
Highway 11	\$ 1,697,926	\$ 1,816,254	\$ 3,514,180
" 67	140,328	49,534	189,862
" 101	532,455	235,070	767,525
" 144	16,156	3,164	19,320
Sec. Hwy. 572	2,542	35,015	37,557
" " 574	15,583	82,572	98,155
" " 575	—	6,330	6,330
" " 576	2,275	26,450	28,725
" " 577	63,058	51,783	114,841
" " 578	26,512	22,787	49,299
" " 579	6,054	81,863	87,917
" " 581	840	7,150	7,990
" " 583	20,516	174,917	195,433
" " 610	941	25,534	26,475
" " 626	176,117	59,224	235,341
" " 629	519,655	14,093	533,748
" " 631	19,923	7,407	27,330
" " 636	6,314	6,785	13,099
" " 652	15,433	26,143	41,576
" " 655	—	28,137	28,137
Tertiary Road 807	12,829	49,005	61,834
Connecting Links:			
Township of Kendrey	4,842	431	5,273
Township of Tisdale	—	1,391	1,391
Town of Cochrane	—	3,248	3,248
Town of Hearst	—	2,987	2,987
Town of Iroquois Falls	—	305	305
Town of Kapuskasing	—	1,315	1,315
Town of Matheson	—	205	205
Town of Timmins	184,533	3,849	188,382
Unincorporated Township Roads:			
Local Roads Board	53,674	133,677	187,351
Statute Labour Board	30,049	12,558	42,607
Special-Settlers	—	1,548	1,548
Indian Reserves	—	400	400
Development Roads	56,749	118,215	174,964
Lands and Buildings	43,204	—	43,204
Ferries	—	24,432	24,432
	\$ 3,648,508	\$ 3,113,778	\$ 6,762,286
Haliburton			
Highway 28	\$ 494,004	\$ 25,043	\$ 519,047
" 35	1,617,639	100,630	1,718,269
" 60	2,496	19,145	21,641
" 121	15,915	153,097	169,012
Sec. Hwy. 503	4,363	54,313	58,676
" " 507	77,911	13,358	91,269
" " 519	345,202	108,233	453,435
" " 530	28,134	29,256	57,390
" " 648	—	79,219	79,219
Connecting Link:			
Township of Dysart et al	—	170	170
Development Roads	533,960	—	533,960
Lands and Buildings	37,413	—	37,413
	\$ 3,157,037	\$ 582,464	\$ 3,739,501

County	Construction	Maintenance	Total
Kenora			
Highway 17	\$ 724,655	\$ 351,982	\$ 1,076,637
" 71	812,009	125,726	937,735
" 72	76,427	59,098	135,525
" 105	36,066	126,180	162,246
" 116	4,209	15,714	19,923
" 119	50	20,994	21,044
" 125	Cr. 4,535	10,273	5,738
" 128	204,196	29,708	233,904
Sec. Hwy. 594	—	26,797	26,797
" " 596	—	51,615	51,615
" " 598	—	4,348	4,348
" " 599	20,027	147,181	167,208
" " 601	25,216	28,842	54,058
" " 603	15,880	3,936	19,816
" " 604	—	8,363	8,363
" " 605	—	11,501	11,501
" " 609	—	15,061	15,061
" " 618	—	8,159	8,159
" " 641	1,171	20,356	21,527
" " 642	8,402	19,200	27,602
" " 646	Cr. 4,634	4,462	Cr. 172
" " 647	86,196	17,777	103,973
" " 657	345	3,853	4,198
" " 659	6,949	21,918	28,867
Tertiary Road 804	588	4,753	5,341
" " 808	2,551	920	3,471
Connecting Links:			
Town of Dryden	—	1,356	1,356
Town of Keewatin	—	673	673
Town of Kenora	—	2,898	2,898
Unincorporated Township Roads:			
Local Roads Board	10,987	73,846	84,833
Statute Labour Board	2,699	31,472	34,171
Special-Settlers	30,842	5,454	36,296
Indian Reserves	—	7,307	7,307
Land and Buildings	10,905	—	10,905
Weigh Scales	1,284	2,688	3,972
	\$ 2,072,485	\$ 1,264,411	\$ 3,336,896
Manitoulin			
Highway 68	\$ 597,827	\$ 141,812	\$ 739,639
Sec. Hwy. 540	261,410	217,717	479,127
" " 540A	—	15,977	15,977
" " 542	399,049	123,341	522,390
" " 542A	—	4,430	4,430
" " 551	27,762	33,477	61,239
" " 637	1,539	72,057	73,596
Connecting Link:			
Town of Little Current	—	1,040	1,040
Unincorporated Township Roads:			
Local Road Board	9,600	23,288	32,888
Statute Labour Board	—	4,220	4,220
Sidewalks	576	—	576
	\$ 1,297,763	\$ 637,359	\$ 1,935,122
Muskoka			
Highway 11	\$ 2,385,526	\$ 190,351	\$ 2,575,877
" 35	152,788	28,669	181,457
" 60	121	40,986	41,107
" 69	851,494	84,143	935,637
" 103	18,897	76,046	94,943
" 118	118,756	137,733	256,489
Sec. Hwy. 501	61,278	34,327	95,605
" " 514	5,165	32,590	37,755
" " 516	584,619	40,552	625,171
" " 525	—	3,884	3,884
" " 527	44,011	42,145	86,156

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Sec. Hwy. 532	110,946	96,638	207,584
" " 592	—	633	633
" " 612	—	10,395	10,395
" " 632	—	61,137	61,137
" " 660	594,998	34,162	629,160
Connecting Links:			
Town of Bracebridge	—	1,765	1,765
Town of Gravenhurst	—	4,170	4,170
Town of Huntsville	55,479	5,840	61,319
Village of Port Carling	—	2,183	2,183
Unincorporated Township Roads:			
Local Roads Board	—	22,029	22,029
Statute Labour Board	—	19,448	19,448
Development Roads	133,444	—	133,444
Lands and Buildings	70,619	—	70,619
	<u>\$ 5,188,141</u>	<u>\$ 969,826</u>	<u>\$ 6,157,967</u>
Nipissing			
Highway 11	\$ 110,917	\$ 297,743	\$ 408,660
" " 17	2,124,813	278,719	2,403,532
" " 60	1,240,059	172,912	1,412,971
" " 63	256,128	129,858	385,986
" " 64	225,261	181,814	407,075
" " 94	250	18,324	18,574
" " 123	1,503	17,929	19,432
" " 127	147	31,486	31,633
Sec. Hwy. 514	480	3,812	4,292
" " 523	—	49,114	49,114
" " 528	—	3,695	3,695
" " 531	—	8,128	8,128
" " 533	8,736	66,697	75,433
" " 539	6,105	74,340	80,445
" " 539A	—	2,337	2,337
" " 630	59,911	31,995	91,906
" " 656	—	2,069	2,069
Tertiary Road 805	35,973	25,202	61,175
Access Road:			
Sherman Mine Road	—	1,824	1,824
Connecting Links:			
City of North Bay	26,305	—	26,305
Town of Sturgeon Falls	—	4,493	4,493
Unincorporated Township Roads:			
Local Roads Board	126,304	114,074	240,378
Statute Labour Board	4,121	5,375	9,496
Special-Settlers	17,466	579	18,045
Development Roads	28,929	—	28,929
Lands and Buildings	69,048	—	69,048
	<u>\$ 4,342,456</u>	<u>\$ 1,522,519</u>	<u>\$ 5,864,975</u>
Parry Sound			
Highway 11	\$ 66,300	\$ 231,046	\$ 297,346
" " 69	36,468	206,827	243,295
" " 124	735,229	130,339	865,568
Sec. Hwy. 510	—	4,363	4,363
" " 518	142,281	125,483	267,764
" " 520	65,883	89,520	155,403
" " 522	198,434	132,280	330,714
" " 524	—	8,383	8,383
" " 526	1,683	7,203	8,886
" " 529	—	36,538	36,538
" " 529A	—	9,417	9,417
" " 532	21,142	40,743	61,885
" " 534	8,445	80,044	88,489
" " 559	—	32,098	32,098
" " 592	25	22,880	22,905
" " 612	—	8,250	8,250
" " 632	—	28,134	28,134

County	Construction	Maintenance	Total
Sec. Hwy. 644	—	1,860	1,860
" " 645	51	7,761	7,812
" " 654	—	44,811	44,811
Connecting Link:			
Town of Parry Sound	—	8,050	8,050
Lands and Buildings	528	—	528
Unincorporated Township Roads:			
Local Roads Board	261,508	179,374	440,882
Statute Labour Board	4,837	47,151	51,988
Special—Settlers	—	15,133	15,133
Indian Reserves	—	7,219	7,219
Development Roads	288,622	92,073	380,695
	\$ 1,831,436	\$ 1,596,980	\$ 3,428,416
Rainy River			
Highway 11	\$ 34,074	\$ 430,570	\$ 464,644
" " 71	9,898	43,108	53,006
Sec. Hwy. 600	5,729	85,926	91,655
" " 602	33,954	49,244	83,198
" " 611	—	22,921	22,921
" " 613	77,142	38,644	115,786
" " 615	—	38,270	38,270
" " 617	859	25,431	26,290
" " 619	6,380	32,229	38,609
" " 621	9,230	43,296	52,526
" " 622	—	42,993	42,993
" " 623	—	17,522	17,522
" " 633	—	5,526	5,526
Connecting Links:			
Town of Fort Frances	222,291	17,002	239,293
Town of Rainy River	—	84	84
Lands and Buildings	1,210	—	1,210
Weigh Scales	326	907	1,233
Unincorporated Township Roads:			
Local Road Board	669	29,112	29,781
Statute Labour Board	—	10,867	10,867
Special—Settlers	—	901	901
Indian Reserve	—	2,477	2,477
Development Roads	3,415	—	3,415
	\$ 405,177	\$ 937,030	\$ 1,342,207
Sudbury			
Highway 17	\$ 1,210,741	\$ 259,356	\$ 1,470,097
" " 64	—	77,288	77,288
" " 68	2,417	56,446	58,863
" " 69	1,228,133	169,267	1,397,400
" " 101	109,369	272,817	382,186
" " 129	144,878	89,077	233,955
" " 144	3,893,470	345,034	4,238,504
Sec. Hwy. 528	—	24,181	24,181
" " 528A	—	10,020	10,020
" " 535	54,079	102,026	156,105
" " 536	275	8,949	9,224
" " 537	64,246	30,880	95,126
" " 539	381,089	12,860	393,949
" " 541	872,202	35,088	907,290
" " 541A	—	4,344	4,344
" " 543	929,490	11,623	941,113
" " 544	—	3,941	3,941
" " 545	877	38,673	39,550
" " 549	68,079	26,612	94,691
" " 553	37,834	17,635	55,469
" " 560	30,589	112,108	142,697
" " 560A	—	11,955	11,955
" " 606	—	2,272	2,272
" " 607	2,455	18,295	20,750
" " 607A	—	4,985	4,985

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Sec. Hwy. 616	—	4,317	4,317
" " 634	15,674	26,455	42,129
" " 637	1,539	57,913	59,452
" " 658	14,053	35,223	49,276
" " 661	—	6,549	6,549
Tertiary Road 805	—	14,935	14,935
" " 806	4,658	9,753	14,411
Industrial Road:			
E. A. Wicks Road	—	15,946	15,946
Connecting Links:			
City of Sudbury	1,158,245	—	1,158,245
Town of Capreol	—	1,464	1,464
Town of Espanola	—	4,263	4,263
Development Roads	875,733	83,319	959,052
Unincorporated Township Roads:			
Local Roads Board	94,031	211,977	306,008
Statute Labour Board	2,625	11,542	14,167
Special-Settlers	5,243	15,579	20,822
Indian Reserves	—	4,820	4,820
Sidewalks	1,552	—	1,552
Lands and Buildings	22,746	—	22,746
	<u>\$11,226,322</u>	<u>\$ 2,249,787</u>	<u>\$13,476,109</u>
Thunder Bay			
Highway 11	\$ 3,373,103	\$ 676,589	\$ 4,049,692
" " 11A	815,228	64,363	879,591
" " 17	1,387,998	826,902	2,214,900
" " 61	1,239,349	77,721	1,317,070
" " 130	8,895	38,862	47,757
Sec. Hwy. 580	—	9,859	9,859
" " 582	—	6,475	6,475
" " 584	383	60,500	60,883
" " 584A	—	2,614	2,614
" " 585	—	56,467	56,467
" " 586	—	5,049	5,049
" " 587	13,529	67,390	80,919
" " 588	19,652	103,975	123,627
" " 589	8,394	59,974	68,368
" " 590	24,659	55,936	80,595
" " 591	—	15,648	15,648
" " 593	6,367	72,911	79,278
" " 595	70,322	37,246	107,568
" " 597	20,895	15,149	36,044
" " 599	903,480	87,006	990,486
" " 608	9,491	24,399	33,890
" " 614	615,531	72,681	688,212
" " 625	—	70,283	70,283
" " 627	—	10,383	10,383
" " 628	—	7,957	7,957
" " 643	—	15,631	15,631
Tertiary Road 800	56,762	68,914	125,676
" " 801	—	5,592	5,592
" " 802	—	1,488	1,488
Industrial Road:			
Caramat to Manitouwadge	—	19,089	19,089
Connecting Links:			
Township of Paipoonge	1,109	—	1,109
Township of Shuniah	7,208	—	7,208
City of Thunder Bay	224,967	—	224,967
Town of Geraldton	24,717	7,166	31,883
Unincorporated Township Roads:			
Local Road Board	119,077	171,359	290,436
Statute Labour Board	16,722	2,063	18,785
Special-Settlers	—	4,034	4,034
Indian Reserves	—	1,400	1,400
Lands and Buildings	163,098	—	163,098
	<u>\$ 9,130,936</u>	<u>\$ 2,823,075</u>	<u>\$11,954,011</u>

County	Construction	Maintenance	Total
Timiskaming			
Highway 11	\$ 938,410	\$ 265,364	\$ 1,203,774
" 65	700,189	219,636	919,825
" 66	370,104	157,142	527,246
" 101	—	36,585	36,585
" 112	217	44,999	45,216
" 144	215,138	39,357	254,495
Sec. Hwy. 558	—	62,698	62,698
" 560	43,767	174,816	218,583
" 562	1,787	20,849	22,636
" 564	—	12,138	12,138
" 566	—	30,667	30,667
" 567	184,357	53,960	238,317
" 568	—	2,106	2,106
" 569	895	52,035	52,930
" 570	—	3,642	3,642
" 571	—	7,688	7,688
" 573	465	36,330	36,795
" 624	123,977	65,028	189,005
" 640	—	3,755	3,755
" 650	—	12,458	12,458
Industrial Road:			
E. A. Wicks Road	—	2,509	2,509
Connecting Links:			
Township of Teck	80	9,286	9,366
Town of Cobalt	3,819	2,859	6,678
Town of Haileybury	—	1,811	1,811
Town of New Liskeard	5,759	11,132	16,891
Unincorporated Township Roads:			
Local Roads Board	23,379	64,704	88,083
Statute Labour Board	45,388	24,523	69,911
Special-Settlers	3,517	1,159	4,676
Development Roads	79,477	—	79,477
Weigh Scales	62	—	62
	<u>\$ 2,740,787</u>	<u>\$ 1,419,236</u>	<u>\$ 4,160,023</u>
County and District Totals	\$206,217,815	\$52,600,041	\$258,817,856
Sundry Unallocated, District Office, Administration, Engineering Building, Inventory Charges, etc	<u>\$ 2,114,977</u>	<u>\$11,118,404</u>	<u>\$ 13,233,381</u>
Total Expenditure	\$208,332,792	\$63,718,445	\$272,051,237

APPENDIX No. 2

Development Road Expenditure in Municipalities by County and Territorial District

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Brant					
853	County Road 13 (part)	2.8	County	\$ 221,664	
888	Blossom Avenue (extension)	3.5	County	182,588	
929	County Roads 50 and 51	1.0	Paris, Town	150,171	
939	County Roads 4 and 16	1.8	County	173,004	
961	County Road 18 (part)	3.6	County	12,602	\$ 740,02
Bruce					
A 799	Ashfield—Huron Townline	0.7	Ashfield, Huron	cr. \$ 96	
819	County Road 13A (part)	1.0	County	4,526	
887	Purple Valley Road (part)	2.7	Albemarle	4,242	\$ 8,67
Ottawa-Carleton					
668	Hwy. 44 to Panmure	4.5	Huntley	\$ 41,981	
822	Road from County Road 26 to Marlborough/Goulbourn Bdry.	4.5	Marlborough	cr. 2,128	
823	Road from South Boundary North to Hwy. 44	5.8	Huntley	cr. 256	
953	Road between Conc. II and III	3.9	Fitzroy	55,164	
1015	March—Torbolton Townline	0.7	March, Torbolton	20,344	\$ 115,10
Dufferin					
841	County Road 18 (part)	12.5	County	\$ 803,332	\$ 803,33
Elgin					
840	County Road 52 (part)	12.1	County	\$ 26,860	
930	County Road 45 (part)	12.3	County	522,383	
931	County Road 20 (part)	5.8	County	46,000	
972	County Roads 47 and 48 (part) and 49	8.9	County	521,145	
1023	County Road 16 (part)	6.9	County	8,000	\$1,124,38
Essex					
697	County Road 1 (part)	9.9	County	\$ 82,795	\$ 82,79
Frontenac					
806	Road from Hwy. 7 to Olden-Hinchinbrooke Bdry.	7.7	Olden	\$ 279,440	
862	County Road 10 (part)	5.2	County	cr. 142	
863	County Road 11A (part)	2.2	County	36,338	
957	County Road 10 (part)	3.5	County	294,832	
973	Clarendon Road	6.7	Clarendon and Miller	37,963	
1010	Wilton Road 4A	4.8	County	228,518	
1011	County Road 10 (part)	3.4	County	15,551	
1016	County Road 1 (part)	1.4	County	5,751	
1017	County Road 8 (part)	1.8	County	6,751	\$ 905,00
Grey					
783	County Road 13 Flesherton to Thornbury	25.0	County	\$ 293,182	
886	County Road 10 (part)	17.5	County	19,243	\$ 312,42

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Haldimand					
791	County Road 12 (part) Old Indian Line.	6.4	County	\$ 230,405	
934	Sandusk Sideroad (part)	8.9	Walpole	220,676	\$ 451,081
Hastings					
711	County Road 4, Frankford S'ly to Hwy. 401	4.5	County	\$ 2,883	
801	Weslemkoon Road	11.0	Tudor and Cashel	143,520	
855	County Road 9 (part)	5.6	County	157,720	
856	County Road 3	7.8	County	332,981	
882	Madawaska Road (part)	9.1	Bangor, Wicklow and McClure	323,155	
914	County Roads 7A (part) and 13 (part)	2.0	County	115,244	
970	Wollaston—Lake Townline	5.3	Marmora, Lake and Wollaston	51,642	
978	Fort Stewart Road—McNeaul Hill	1.6	Carlow	105,931	
979	Musclow Road (part)	5.4	Monteagle	108,850	\$ 1,341,926
Huron					
A 799	Ashfield—Huron Townline	0.6	Ashfield, Huron	cr. \$ 96	
898	County Road 12 (part)	1.3	County	368,365	
899	County Road 3 (part)	4.2	County	41,449	\$ 409,718
Kent					
697	County Road 1 (part)	9.9	County	\$ 81,139	\$ 81,139
Lambton					
B 724	Middlesex County Road 12— Lambton Cty. Road 6A from Hwy. 81—Arkona	1.1	County	\$ 4,408	
733	Tri-County Bridge to Hwy. 21	2.7	Bosanquet	cr. 105	
837	County Road 5 (part)	8.1	County	73,604	
857	County Road 4	5.4	County	284,564	
858	County Road 2 (part)	4.4	County	30,671	\$ 393,142
Lanark					
613	Fallbrooke Westerly	8.0	Bathurst	\$ 16,794	
846	County Road 5 (part)	6.1	County	293,340	
933	County Road 6 (part)	8.0	County	312,318	
992	Township Road	3.9	Drummond	82,308	
1008	County Road 4 (part) (Westport Road)	6.0	County	19,211	
1020	Various Road Sections	1.5	Beckwith	14,136	\$ 738,107
Leeds and Grenville					
916	County Road 13	6.2	County	\$ 577,853	
940	Athens—Addison Road (part)	2.0	Rear of Yonge and Escott	166,897	
941	Athens—Addison Road (part)	1.0	Elizabethtown	59,229	
971	County Road 5 (part)	7.8	County	7,476	\$ 811,455

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Lennox and Addington					
761	Dorland to Sir John A. MacDonald's Monument	3.7	Adolphustown	\$ 7,210	
868	County Road 9 (part)	4.8	County	69,112	
900	County Road 3	1.7	County	73,114	
902	Vennachar Road	2.7	Denbigh, Abinger and Ashby	864	
907	County Road 14 (part)	4.2	County	169,147	
908	County Road 8 (part)	2.9	County	225,229	
981	County Road 6 (part)	5.1	County	45,323	
984	Carmanville Road (part)	0.3	Camden East	11,473	
999	County Road 6B	2.1	County	102,043	
1000	County Road 14 (part)	3.1	County	1,757	
1001	County Road 4 (part)	0.4	County	478	
1006	Hay Bay Road	6.0	South Fredericksburgh	23,970	\$ 729,72
Middlesex					
B 724	Middlesex Cty. Road 12 and Lambton Cty. Road 6A from Hwy. 81—Arkona	6.4	County	\$ 24,242	\$ 24,24
Niagara					
683	Lincoln and Welland County Line	14.4	County	\$ 108,375	
787	South Chippawa Road	7.2	Caistor	16,324	
990	County Road 9A (part)	4.5	County	153,352	\$ 278,05
Norfolk					
895	County Road 30 (part)	4.6	County	\$ 439,729	
958	County Road 29 (part)	2.5	County	21,989	
1024	County Road 1 (part)	4.3	County	159,772	\$ 621,49
Northumberland and Durham					
703	Healey's Falls Road	4.3	Seymour	\$ 5,506	
818	County Road 70 (part)	1.7	County	1,897	
920	County Road 18 (part)	4.6	County	354,066	
945	Proposed County Road	3.0	County	947	
946	Proposed County Road	4.2	County	1,082	
947	Colborne to Lakeport Road	2.7	County	1,431	\$ 364,92
Ontario					
848	County Road 12 (part)	4.3	County	\$ 54,103	
849	County Road 1A (part)	2.1	County	50,241	
850	County Road 11A(part)	2.8	County	5,560	
959	County Road 4 (part)	7.5	County	12,009	
960	Proposed Ontario County Road 23	13.4	County	60,165	\$ 182,07
Peel					
744	Twentieth Side Road	4.7	Albion	\$ 1,077	\$ 1,07
Peterborough					
587	Havelock—Lasswade	17.7	Belmont and Methuen	\$ 1,428	
700	North Shore Stoney Lake Road	6.0	Burleigh and Anstruther	156,860	
832	County Road 2 (part)	4.5	County	68,441	
833	County Road 6 (part)	5.1	County	26,048	
838	County Road 4 (part)	9.4	County	113,243	
966	Preneveau Road, County Road 50	2.1	County	132,944	
967	County Road 34 (part)	4.0	County	282,549	
968	Twin Lakes to Lasswade Proposed Cty. Road (part)	12.8	County	29,551	
996	County Road 24	4.6	County	13,277	
1025	County Road 12, Fife's Bay Road	3.4	County	\$ 2,093	\$ 826,43

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Prescott and Russell					
773	County Road 2 (part)	15.6	County	cr. \$ 204	
789	County Road 18 to Quebec Border	6.3	County	511	
864	County Road 9 (part)	7.9	County	29,392	
865	County Road 15 (part)	8.3	County	33,319	
969	County Road 3 (part)	5.6	County	571,263	
985	Road 15A (part)	2.0	County	172,797	
1002	County Road 10A (part)	3.6	County	315,576	
1003	County Road 14 (part)	10.0	County	181,531	
1004	County Road 7 (part)	6.1	County	308,442	
1005	County Road 2 (part)	4.2	County	3,675	
1018	County Road 9 (parts)	6.6	County	4,818	\$1,621,120
Prince Edward					
866	County Road 12 (part)	3.0	County	\$ 12,909	
942	County Roads 10 and 18 (part)	5.5	County	120,604	
993	County Road 9 (part)	8.1	County	6,220	
994	County Road 7 (part)	3.8	County	256,278	\$ 396,011
Renfrew					
541	Admaston—Bagot Townline Road	10.4	Admaston, Bagot and Blythfield	\$ 18,512	
795	Barry's Bay Road	9.1	Sherwood, Jones and Burns	212,195	
796	Opeongo Road	10.2	Sebastopol	48,203	
797	Opeongo Road (part)	6.6	Brudenell and Lyndoch	7,398	
798	Ruby Road (part)	7.9	South Algoma	55,540	
897	Opeongo Road (part)	6.0	Grattan	238,078	
980	Ruby Road (part)	1.7	Hagarty and Richards	129,291	\$ 709,217
Simcoe					
760	Tenth Side Road	7.7	Tecumseth	\$ 127,301	\$ 127,301
Stormont, Dundas and Glengarry					
839	County Road 12 (part)	6.3	County	\$ 17,487	
921	County Road 15 (part)	5.0	County	81,481	
922	County Road 23 (part)	4.8	County	35,932	
923	County Road 12 (part)	7.9	County	415,619	
924	County Road 1 (part)	6.9	County	67,898	\$ 618,417
Victoria					
775	County Road 28 (part)	5.6	County	\$ 479	
842	County Road 5 (part)	6.3	County	107,457	
843	County Road 4, 6, and 6A (part)	5.5	County	13,339	
851	County Road 8	14.4	County	517,197	
852	Road Westerly from Hwy. 121	2.3	Somerville	10,966	
991	County Road 4 (part)	3.6	County	4,258	\$ 653,696
Wellington					
825	County Road 58 (part)	10.5	County	\$ 26,991	
834	County Road 18 (part) and County Road 20 (part)	7.2	County	244,681	
835	County Road 26 (part)	9.3	County	68,752	
986	County Road 34 (part)	4.0	County	318,888	
987	County Road 8 (part)	0.8	County	159,214	
988	County Road 18 (part)	4.0	County	290,187	
989	County Road 7 (part)	3.6	County	303,099	
1022	County Road 14 (part)	7.4	County	257,987	\$1,669,799

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County & Territorial District
Cochrane					
901	Brunelle Road	1.0	Kapuskasing, Town	\$ 56,749	
997	The Genier Road and Glackmeyer— Blount Townline	12.2	County	118,215	\$ 174,968
Haliburton					
912	Haliburton County Road 1	21.2	County	\$ 515,412	
975	Kawagama Lake Road	2.6	Sherborne, McClintock and Livingstone	18,548	\$ 533,960
Muskoka					
963	Brunel Road (part)	2.0	County	\$ 4,782	
964	Housey's Rapids—Barkway Road	4.4	Ryde	123,242	
1007	Brunel Road (part)	1.0	Stephenson	5,420	\$ 133,444
Nipissing					
873	Road between lots 1 and 2 southerly from Hwy. 17	2.3	Springer	\$ 28,929	\$ 28,929
Parry Sound					
614	Humphrey Boundary Northerly	3.0	Christie	\$ 1,928	
814	Road between Conc. VIII/IX opposite Lots 12, 13 and 14.	2.3	Ryerson	78,299	
828	Mill Street	0.3	Powassan, Town	20,707	
965	Whitestone Lake Road (part)	0.9	Hagerman	7,095	
974	Cardwell Road (part)	0.5	County	444	
976	McKellar Centre Road (part)	3.1	McKellar	184,310	
977	Eagle Lake Road (part)	7.8	Machar	87,912	\$ 380,665
Rainy River					
974	Township Road	7.1	Worthington	\$ 3,415	\$ 3,415
Sudbury					
913	Garson—Coniston Road	4.7	Neelon and Garson	\$ 848,587	
951	Lee Valley Road (part)	8.0	Hallam	49,472	
1013	Vermilion Lake Road	5.6	Dowling	24,544	
1019	Lee Valley Road (part)	6.3	Salter, May and Harrow	36,449	\$ 959,052
Timiskaming					
809	Blanche River Bridge	0.1	Evanturel	\$ 13,953	
831	Little Otter Creek Bridge	0.1	Hilliard	41,363	
926	Bear Creek Bridge	—	Dymond, Harley	24,161	\$ 79,476
Totals				913.8	\$19,435,812

Development Roads split into two counties

A. Huron and Bruce

B. Middlesex and Lambton

APPENDIX No. 3

Department Expenditures by Highways

Hwy No	Location	Mileage	Construction	Maintenance	Total
King's Highways					
2	Quebec Border—Windsor	426.8	\$ 2,628,992	\$ 1,778,218	\$ 4,407,210
2A	Hwy. 401 (M.-C.F.)—Hwy. 2 (Toronto)	1.3	148,080	22,142	170,222
2S	Brockville—Gananoque	24.5	19,569	95,791	115,360
3	Fort Erie—Windsor	237.8	2,390,655	854,922	3,245,577
3A	Hwy. 58 (Welland)—Hwy. 3	9.5	1,455	40,165	41,620
3C	Fort Erie—Ridgeway	6.8	141	36,685	36,826
4	Port Stanley—Flesherton	131.5	1,642,530	513,800	2,156,330
5	Toronto—Paris	47.1	564,035	336,128	900,163
6	Port Dover—Tobermory	197.5	3,024,276	733,000	3,757,276
7	Ottawa—Sarnia	431.3	4,659,457	1,813,943	6,473,400
7A	Hwy. 115—Hwy. 12 (Manchester)	30.7	48,110	113,107	161,217
8	Niagara Falls—Goderich [7]	99.3	7,088,757	497,851	7,586,608
8A	Queenston—St. Davids	2.4	3,350	16,110	19,460
9	Hwy 11—Kincardine	108.0	1,873,643	431,907	2,305,550
10	Port Credit—Owen Sound	85.1	2,128,626	504,973	2,633,599
11	Toronto—Rainy River	1184.4	9,427,315	4,532,322	13,959,637
11A	Port Arthur—Shabagua Cors.	20.5	815,228	64,363	879,591
12	Whitby—Midland [7]	68.2	152,468	364,818	517,286
14	Bloomfield—Marmora	41.2	113,415	126,670	240,085
15	Kingston—Ottawa [7]	71.9	11,499	252,309	263,808
16	Johnstown—Ottawa	49.2	267,377	157,885	425,262
17	Quebec Boundary—Manitoba Boundary	1232.8	12,018,671	3,877,292	15,895,963
18	Leamington—Windsor	38.4	107,214	92,641	199,855
18A	Kingsville—Hwy. 18	19.4	28,731	39,236	67,967
19	Port Burwell—Tralee	67.9	86,278	231,674	317,952
20	Niagara Falls—Hamilton	40.0	13,062	236,047	249,109
21	Hwy. 3 (Morpeth)—Owen Sound	176.0	206,512	576,261	782,773
22	London—Hwy. 7	27.6	7,257	197,064	204,321
23	Hwy. 7—Hwy. 9 (Teviotdale)	55.9	723,196	177,382	900,578
24	Port Dover—Collingwood	112.9	1,622,475	396,932	2,019,407
24A	Paris—Galt	14.4	5,450	66,731	72,181
25	Oakville—Hwy. 24 (Ospringe Mills)	25.4	20,865	115,418	136,283
26	Barrie—Owen Sound	63.2	338,580	284,875	623,455
27	Toronto—Penetanguishene	87.4	17,290,394	617,909	17,908,303
28	Port Hope—Bancroft	81.3	594,465	343,726	938,191
29	Brockville—Arnprior [15]	51.8	162,255	155,996	318,251
30	Brighton—Havelock	28.9	33,178	94,523	127,701
31	Morrisburg—Ottawa	40.4	16,342	155,983	172,325
32	Gananoque—Hwy. 15	11.3	1,126	38,383	39,509
33	Kingston—Stirling	73.3	138,871	415,401	554,272
34	Hwy. 2 (Lancaster)—Hawkesbury	34.1	19,739	147,697	167,436
35	Hwy. 401 (Newcastle)—Dwight	119.7	1,970,882	354,357	2,325,239
35A	Fenelon Falls—Hwy. 35	2.0	77	4,993	5,070
36	Burleigh Falls—Lindsay	44.1	573,295	136,966	710,261
37	Belleville—Hwy. 7 (Actinolite)	26.9	2,274	79,381	81,655
38	Kingston—Hwy. 7 (N. of Sharbot Lake)	44.1	190,335	109,272	299,607
39	Hwy. 2—Windsor	11.1	18,231	23,440	41,671
40	Chatham—Sarnia	55.6	676,199	144,790	820,989
41	Napanee—Pembroke	131.5	1,604,001	392,376	1,996,377
42	Brockville—Westport [29]	31.3	441,296	77,373	518,669
43	Alexandria—Perth	85.9	217,196	296,863	514,059
44	Hwy. 17—Hwy. 29 (Almonte)	8.6	654	30,604	31,258
45	Cobourg—Norwood	31.4	27,049	100,524	127,573
46	Hwy. 7 (E. of Manilla)—Coboconk	31.6	38,603	67,476	106,079
47	Hwy. 7 (S. of Greenbank)— Hwy. 48 (Ringwood)	17.8	861,244	114,345	975,589
48	Toronto—Hwy. 46 (Bolsover) [12]	56.9	628,062	362,848	990,910
49	Pictou—Hwy. 2 (W. of Deseronto) [2]	13.9	960,196	44,681	1,004,877
50	Toronto—Hwy. 9 (N. of Palgrave)	18.5	235,417	112,203	347,620
52	Hwy. 2 (W. of Duffs Cors.)— Wentworth City Line	15.4	746	66,933	67,679
53	Hamilton—Hwy. 2 (Eastwood)	23.8	28,281	94,914	123,195
54	Cayuga—Cainsville	24.7	5,708	101,731	107,439

Hwy No	Location	Mileage	Construction	Maintenance	Total
56	Hwy. 3 (Canfield)—Hwy. 20 (E. of Elfrida)	14.6	3,758	66,527	70,285
57	Hwy. 3A—Bismarck	8.9	495	36,666	37,161
58	Port Colborne—St. Catharines	18.4	1,361,862	189,743	1,551,605
59	Long Point—Hwy. 3 (E. of Tillsonburg)	64.3	196,858	209,284	406,142
60	Hwy. 17 (W. of Renfrew)—Huntsville	146.8	1,248,928	438,573	1,687,501
61	International Border—Thunder Bay	36.6	1,239,349	77,721	1,317,070
62	Hwy. 14 (N. of Belleville)—Pembroke	146.0	687,065	502,043	1,189,108
63	North Bay—Quebec Border	38.4	256,128	129,858	385,986
64	Sturgeon Falls—Hwy. 11	80.9	225,261	259,102	484,363
65	Quebec Border—Matachewan	79.4	700,189	219,636	919,825
66	Quebec Border—Hwy. 65 (E. of Matachewan)	60.9	370,104	157,142	527,246
67	Hwy. 101 (S. of Barbers Bay)— Iroquois Falls	20.7	140,328	49,534	189,862
68	South Baymouth—Hwy. 17 (N. of Espanola)	78.9	600,244	198,258	798,502
69	Hwy. 12 (N. of Brechin)—Capreol	197.0	2,124,828	552,387	2,677,215
70	Springmount—Hepworth	9.1	370	27,534	27,904
71	Fort Frances—Hwy. 17 (E. of Kenora)	98.8	821,907	168,834	990,741
72	Hwy. 17 (Dinorwic)—Sioux Lookout	42.2	76,427	59,098	135,525
73	Port Bruce—Dorchester	23.6	6,162	66,926	73,088
74	Hwy. 3 (New Sarum)—Nilestown	13.2	3,207	39,125	42,332
76	Hwy. 3 (Eagle)—Hwy. 2	11.3	455	28,310	28,765
77	Leamington—Hwy. 401 (N. of Comber)	14.0	459,104	29,252	488,356
78	Hwy. 21 (Dresden)—Wallaceburg	9.5	4,863	25,683	30,546
79	Hwy. 2 (Bothwell)—Hwy. 7	28.5	15,751	65,824	81,575
80	Hwy. 2 (S. of Glencoe)—Courtright	42.4	143,035	103,418	246,453
81	Delaware—Grand Bend	38.0	670,488	106,478	776,966
82	Hwy. 7 (Thedford)—Hwy. 21	5.5	4,123	11,361	15,484
83	Russeldale—Hwy. 21 (N. of Grand Bend)	24.1	11,004	57,414	68,418
84	Hensall—St. Joseph	10.7	1,414	29,382	30,796
85	Kitchener—Elmira	6.8	2,194	25,495	27,689
86	Guelph—Amberley	78.9	91,209	315,402	406,611
87	Harriston—Hwy. 86 (Bluevale)	19.7	9,583	58,464	68,047
88	Bradford—Hwy. 27 (Bond Head)	5.0	342	22,427	22,769
89	Hwy. 400—Hwy. 23 (E. of Palmerston)	63.7	627,287	218,941	846,228
90	Barrie—Angus	10.0	3,103	51,473	54,576
91	Stayner—Dunroon	5.0	998	17,056	18,054
92	Elmvale—Wasaga Beach	7.9	218	36,512	36,730
93	Hwy. 11 (E. of Barrie)—Waverley	17.5	1,667	71,527	73,194
94	Callander—Hwy. 17 (S. of North Bay)	5.8	250	18,324	18,574
95	Hornes Point—Wolfe Is.	7.1	2,817	33,492	36,309
96	Quebec Head—(W. end of Wolfe Is.)	22.9	8,303	128,829	137,132
97	Hwy. 6 (Freelton)—Hickson	39.0	20,324	170,827	191,151
98	Blenheim—Windsor	53.3	50,399	125,341	175,740
99	Dundas—Hwy. 24 (N. of Brantford)	15.9	33,082	71,306	104,388
101	Quebec Border—Hwy. 17 (Wawa)	288.9	648,179	647,078	1,295,257
103	Port Severn—Hwy. 69	29.9	29,757	100,046	129,803
104	Hwy. 9—Grand Valley	1.8	348	6,269	6,617
105	Hwy. 17—Red Lake	110.5	36,066	126,180	162,246
106	Hwy. 28 (Dale)—Hwy. 2 (Welcome)	2.6	99	10,770	10,869
107	Hwy. 18—Hwy. 3 (Ruthven)	1.0	343	2,052	2,395
108	Hwy. 17—Hwy. 639 (Quirke Lake)	26.0	155,714	60,388	216,102
112	Hwy. 11—Hwy. 66 (Swastika)	12.4	217	44,999	45,216
114	Hwy. 3 (Maidstone)—Hwy. 98	1.2	378	2,257	2,635
115	Newcastle—Peterborough [35]	17.1	11,373	74,014	85,387
116	Hwy. 72 (Patricia)—Hudson	10.6	4,209	15,714	19,923
117	Metro N. Lts.—Hwy. 7	1.3	42	8,333	8,375
118	Dorset—Hwy. 69	48.3	118,756	137,733	256,489
119	Hwy. 17 (Dryden)—Richan	13.9	50	20,994	21,044
121	Hwy. 28—Hwy. 35 (S. of Fenelon Falls)	79.8	18,432	225,933	244,365
122	Oakville—Q.E.W. (N. of Clarkson)	5.1	521,801	54,665	576,466
123	Hwy. 11—North Bay Airport	4.5	1,503	17,929	19,432
124	Hwy. 69 (N. of Parry Sound)—Sundridge	52.8	735,229	130,339	865,568
125	Hwy. 105—Red Lake	9.2	4,535 cr.	10,273	5,733
126	Hwy. 401—Hwy. 2 (London)	3.2	15,980	23,805	39,785
127	Maynooth—Hwy. 60 (E. of Whitney)	23.9	34,760	79,904	114,664
128	Kenora—Redditt	17.3	204,196	29,708	233,904
129	Thessalon—Chapleau	151.9	400,833	357,293	758,126
130	Thunder Bay—Hwy. 61	17.7	8,895	38,862	47,757

Hwy No	Location	Mileage	Construction	Maintenance	Total
132	Renfrew—Hwy. 41	17.6	2,612	60,209	62,821
133	Hwy. 33 (Millhaven)—Hwy. 401	6.3	197	18,287	18,484
135	Hwy. 401—Hwy. 2 (London)	3.8	457	10,857	11,314
136	Hwy. 24—Orangeville	7.3	237	41,063	41,300
137	Hwy. 401—Thousand Island Bridge	1.9	1,720	13,042	14,762
138	Cornwall—Monkland	11.1	847,407	39,542	886,949
140	Hwy. 3 (Port Colborne)—Hwy. 20	—	29,399	—	29,399
144	Sudbury—Hwy. 101	154.5	4,124,764	387,555	4,512,319
400	Toronto—Hwy. 12 (Coldwater)	75.3	1,340,900	1,342,371	2,683,271
401	(M.-C.F.) Quebec Border—Windsor	512.4	27,943,684	5,297,428	33,241,112
402	Hwy. 7—Blue Water Bridge	3.7	531,716	22,542	554,258
403	Burlington—Brantford	20.9	2,203,050	298,804	2,501,854
404	Toronto—Hwys. 7 and 12	—	35,395	—	35,395
405	Q.E.W.—International Bridge (Queenston)	5.3	251,655	66,107	317,762
406	Hwys. 20 and 58—Q.E.W.	5.2	3,303,268	38,155	3,341,423
407	Hwys. 35 and 115—Hwy. 27	—	702,973	—	702,973
416	Johnstown—Ottawa	—	1,206,047	—	1,206,047
417	Quebec Border—County Rd. 9 (West of Ottawa)	—	3,590,897	—	3,590,897
427	Hwy. 401—Steeles Ave.	—	925	—	925
Q.E.W.	Toronto—Fort Erie	95.0	17,052,447	1,781,831	18,834,278
Total Expenditure Allocated to King's Highways			\$157,261,243	\$ 41,178,210	\$198,439,453

Secondary Highways

500	Denbigh—Bancroft	38.6	\$ 155,698	\$ 134,412	\$ 290,110
501	Hwy. 103—Honey Harbour	8.0	61,278	34,327	95,605
502	Napanee—Marysville	7.4	6,687	21,254	27,941
503	Tory Hill—Kirkfield	76.4	75,526	203,819	279,345
504	Hwy. 620—Apsley	16.3	1,641	47,082	48,723
505	Hwy. 46—Uphill	11.8	2,109	29,191	31,300
506	Plevna—Hwy. 41	20.5	1,932	78,729	80,661
507	Hwy. 28 (Lakefield)—Hwy. 503	37.7	164,858	110,697	275,555
508	Burnstown—Black Donald Mines	20.7	2,682	73,632	76,314
509	Hwy. 7—Snow Road Station	12.1	2,764	31,993	34,757
510	Magnetawan—Hwy. 124	1.9	—	4,363	4,363
511	Brightside—Hwy. 508	21.4	4,985	76,652	81,637
512	Eganville—Hwy. 60	29.4	2,846	93,809	96,655
513	Hwy. 132—East of Hyndford	9.8	—	39,097	39,097
514	Hwy. 60—Interlaken	10.0	5,645	36,402	42,047
515	Hwy. 512—Conbermere	28.0	106,047	106,750	212,797
516	Port Sidney—Windermere	16.0	584,619	40,552	625,171
517	Twp. Rd. (Near New Carlow)—Hwy. 62	10.4	626	45,460	46,086
518	Sand Lake—Hwy. 69	54.4	142,281	125,483	267,764
519	Hwy. 121—Redstone Lake	34.3	345,202	108,233	453,435
520	Burk's Falls—Ardbeg	31.8	65,883	89,520	155,403
522	Hwy. 11—West of Loring	48.9	198,434	132,280	330,714
523	Lyell Twp. Line—Hwy. 60	13.5	—	49,114	49,114
524	Hwy. 522—Hwy. 534 (E. of Restoule)	3.1	—	8,383	8,383
525	Granvenhurst—Muskoka Lake	1.5	—	3,884	3,884
526	Hwy. 69—West of Britt	2.3	1,683	7,203	8,886
527	Baysville—Huntsville	14.5	44,011	42,145	86,156
528	Wolesey Bay—Hwy. 64	8.3	—	27,876	27,876
528A	Pine Cove Landing—Hwy. 528	3.3	—	10,020	10,020
529	Hwy. 69—Hwy. 69 (Magnetawan R.)	15.7	—	36,538	36,538
529A	Hwy. 529—Bayfield Wharf	3.0	—	9,417	9,417
530	Hwy. 519—Hwy. 35 (Carnarvon)	11.6	28,134	29,256	57,390
531	Bonfield—Hwy. 17	2.3	—	8,128	8,128
532	Hwy. 11 (S. of Bracebridge)—Hwy. 69	40.0	132,088	137,381	269,469
533	Mattawa—Hwy. 63	31.6	8,736	66,697	75,433
534	Powassan—Restoule	21.9	8,445	80,044	88,489
535	Hwy. 64—Rivière Veuve	29.9	54,079	102,026	156,105
536	Hwy. 17—Creighton	3.8	275	8,949	9,224
537	Hwy. 69—Hwy. 17 (Wahnapitae)	11.8	64,246	30,880	95,126
538	Algoma Mines Loop	4.1	—	10,689	10,689
539	Hwy. 64—Warren	24.3	387,194	87,200	474,394
539A	Hwy. 539—Tertiary Rd. 805	0.8	—	2,337	2,337
540	Little Current—Meldrum Bay	86.6	261,410	217,717	479,127

DEPARTMENT OF HIGHWAYS, ONTARIO

Hwy No	Location	Mileage	Construction	Maintenance	Total
540A	Hwy. 540—Barrie Island	2.5	—	15,977	15,977
541	Sudbury—Skead	14.5	872,202	35,088	907,290
541A	Falconbridge—Hwy. 541	1.9	—	4,344	4,344
542	Hwy. 68—Gore Bay	44.6	399,049	123,341	522,390
542A	Hwy. 542—Tehkummah	1.5	—	4,430	4,430
543	Long Lake—Sudbury	4.7	929,490	11,623	941,113
544	Levack—Hwy. 144	1.7	—	3,941	3,941
545	Hwy. 541—Milnet	16.5	877	38,673	39,550
546	Hwy. 17—Mississagi Prov. Park	47.8	54,861	107,830	162,691
547	Hwy. 101—Hawk Jct.	3.8	—	7,588	7,588
548	Hilton Beach—Hwy. 17	45.6	56,042	143,487	199,529
549	Lake Panache—Hwy. 17	8.6	68,079	26,612	94,691
550	Sault Ste. Marie—Gros Cap	6.5	34,199	16,297	50,496
551	Providence Bay—Hwy. 540	11.6	27,762	33,477	61,239
552	Hwy. 556—Twp. Rd. (E. of Hwy. 17)	11.6	—	33,075	33,075
552A	Hwy. 552—Hwy. 17	1.0	—	2,177	2,177
553	Massey—Richie Falls Camp	48.7	40,635	113,095	153,730
554	Hwy. 546—Hwy. 129	10.9	82,940	25,358	108,298
555	Magog Lake—Hwy. 557	7.0	2,627	18,502	21,129
556	Hwy. 17 (Heyden)—Christina Mine Road	26.3	81,289	101,653	182,942
557	Blind River—Matinenda Lake	12.6	41	32,988	33,029
558	Haileybury—Montreal River	16.0	—	62,698	62,698
559	Hwy. 69 (Nobel)—Hwy. 69	13.0	—	32,098	32,098
560	Hwy. 11—Hwy. 144 (S. of Gogama)	120.9	74,356	286,924	361,280
560A	Westree—Hwy. 560	6.2	—	11,955	11,955
561	Bruce Mines—Hwy. 638	13.5	75,123	29,458	104,581
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	9.0	1,787	20,849	22,636
563	Batchawana—Hwy. 17	3.4	—	6,788	6,788
564	Blanche R. Br.—Hwy. 112	6.6	—	12,138	12,138
565	Pte. Aux Pins—Hwy. 550	1.0	—	2,507	2,507
566	Matachewan—Ashley Mine	16.4	—	30,667	30,667
567	E. of Silver Centre—N. Cobalt	20.2	184,357	53,960	238,317
568	Hwy. 11—Kenogami	1.0	—	2,106	2,106
569	Hwy. 11—Hwy. 11 (S. of Englehart)	17.5	895	52,035	52,930
570	Sesekinika—Hwy. 11	1.9	—	3,642	3,642
571	Hwy. 562—Earlton	3.6	—	7,688	7,688
572	Hwy. 11 (Ramore)—Hwy. 101	10.3	2,542	35,015	37,557
573	Charlton—Hwy. 11	12.0	465	36,330	36,795
574	Twp. Rd. (S. of Norembege)—Hwy. 579	18.0	15,583	82,572	98,155
575	Hwy. 101 (Night Hawk Centre) S'ly	3.0	—	6,330	6,330
576	Hwy. 101—Kam-Kotia Mine	15.5	2,275	26,450	28,725
577	Hwy. 101—Iroquois Falls	14.9	63,058	51,783	114,841
578	Iroquois Falls—Hwy. 11	5.6	26,512	22,787	49,299
579	Cochrane—Gardiner	21.8	6,054	81,863	87,917
580	Hwy. 11—Lake Nipigon	7.7	—	9,859	9,859
581	Hwy. 11—Remi Lake	3.3	840	7,150	7,990
582	Hurkett—Hwy. 17	4.0	—	6,475	6,475
583	Mead—Lac Ste. Therese	30.1	20,516	174,917	195,433
584	Hardrock Mine—Nakina	42.3	383	60,500	60,883
584A	Hwy. 11—Hwy. 584	2.4	—	2,614	2,614
585	Hwy. 11—Pine Portage	22.9	—	56,467	56,467
586	Hwy. 11—Lower Shebandowan Lake	3.3	—	5,049	5,049
587	Silver Islet—Hwys. 11 and 17	26.0	13,529	67,390	80,919
588	Stanley—Round Lake Road	34.8	19,652	103,975	123,627
589	Hwys. 11A and 17A—Dog Lake Road	18.7	8,394	59,974	68,368
590	Hwy. 130—Hwy. 588 (Nolalu)	25.1	24,659	55,936	80,595
591	Hwy. 589 Northerly	4.9	—	15,648	15,648
592	Hwy. 11 (Novar)—Hwy. 11	10.2	25	23,513	23,538
593	Hwy. 61—Hwy. 588 (Nolalu)	29.9	6,367	72,911	79,278
594	Dryden—Hwy. 17	21.4	—	26,797	26,797
595	Hwy. 597—Hwy. 590	25.3	70,322	37,246	107,568
596	Kenora—N. of Minaki	29.6	—	51,615	51,615
597	Pardee—Hwy. 603	9.5	20,895	15,149	36,044
598	Hwy. 604—Hwy. 128 (N. of Kenora)	2.7	—	4,348	4,348
599	Ignace—Tertiary Rd. 808	187.4	923,507	234,187	1,157,694
600	Hwy. 71—Rainy River	53.9	5,729	85,926	91,655
601	Hwy. 17—Dryden	15.0	25,216	28,842	54,062
602	Fort Frances—Emo	29.1	33,954	49,244	83,198
603	Hwy. 17—Dymont	2.8	15,880	3,936	19,816

Hwy No	Location	Mileage	Construction	Maintenance	Total
604	Hwy. 17—Kenora Airport	5.5	—	8,363	8,363
605	Hwy. 17—Rugby Lake	7.7	—	11,501	11,501
606	Hwy. 17—Markstay	1.0	—	2,272	2,272
607	Hwy. 69 (Big Wood)—Hwy. 64.	5.9	2,455	18,295	20,750
607A	French River—Hwy. 607	1.5	—	4,985	4,985
608	Hwy. 61—Hwy. 595 (S. Gillies)	11.9	9,491	24,399	33,890
609	Hwy. 105—Clay Lake	10.1	—	15,061	15,061
610	Hwy. 67—Hwy. 101 (Hoyle)	13.3	941	25,534	26,475
611	Hwy. 602—Burriss/Miscampbell Twp. Line	12.5	—	22,921	22,921
612	Hwy. 103 (Mactier)—Hwy. 69	7.0	—	18,645	18,645
613	Hwy. 602—Lake Despair	25.5	77,142	38,644	115,786
614	Hwy. 17—Manitouwadge	36.4	615,531	72,681	688,212
615	Hwy. 17—Buroitt Lake	13.6	—	38,270	38,270
616	Hwy. 101—Palomar	2.0	—	4,317	4,317
617	Hwy. 11 (Stratton)—Hwy. 600	14.4	859	25,431	26,290
618	Red Lake—Madsen	7.3	—	8,159	8,159
619	Hwy. 11 (Pinewood)—Hwy. 621	25.3	6,380	32,229	38,609
620	Hwy. 62—Hwy. 28 (Apsley)	25.4	82,598	81,062	163,660
620A	Hwy. 620—Hwy. 28	0.3	—	868	868
621	Hwy. 11—Lake of the Woods.	40.0	9,230	43,296	52,526
622	Hwy. 11 (Atikokan) Northerly	6.8	—	42,993	42,993
623	Hwy. 11—Sapawe	3.1	—	17,522	17,522
624	Hwy. 11—Larder Lake	26.3	123,977	65,028	189,005
625	Caramat—Hwy. 11	20.0	—	70,283	70,283
626	Matheson—Porquois Jct.	19.4	176,117	59,224	235,341
627	Heron Bay—Hwy. 17	5.2	—	10,383	10,383
628	Red Rock—Hwys. 11 and 17	4.4	—	7,957	7,957
629	Timmins—Timmins Airport	6.7	519,655	14,093	533,748
630	Kiosk—Hwy. 17	18.0	59,911	31,995	91,906
631	S. of Hornepayne—Hwy. 11	71.0	1,157,334	218,029	1,375,363
632	Hwy. 118—Rosseau	17.1	—	89,271	89,271
633	Hwy. 11—Kawene	3.7	—	5,526	5,526
634	Val Caron—Hwy. 144.	11.2	15,674	26,455	42,129
635	Hwy. 17—Ottawa River Bridge	1.6	—	5,066	5,066
636	Hwy. 11—Frederick House	3.0	6,314	6,785	13,099
637	Hwy. 69—Killarney.	41.8	3,078	129,970	133,048
638	Dunns Valley—Echo Bay	23.9	38,438	53,192	91,630
639	Hwy. 108—Hwy. 546.	14.3	4,910	44,347	49,257
640	Hwy. 571—Earlton Airport Entrance	1.7	—	3,755	3,755
641	Hwy. 17—Pellatt	8.4	1,171	20,356	21,527
642	Alcona—Sioux Lookout	11.3	8,402	19,200	27,602
643	Hwy. 584—Twp. Rd. to Cavell	12.0	—	15,631	15,631
644	Hwy. 69 (Pte. au Baril) Easterly.	0.6	—	1,860	1,860
645	Hwy. 529—Bing Inlet.	2.5	51	7,761	7,812
646	Pickle Crow—Central Patricia.	6.7	cr. 4,634	4,462	cr. 172
647	Hwy. 17—Blue Lake Prov. Park	5.5	86,196	17,777	103,973
648	Dyno Mine—W. Jct. Hwy. 121	23.5	—	79,219	79,219
649	Bobcaygeon—Hwy. 121.	10.9	423	27,588	28,011
650	O.N.R. Right of Way—Hwy. 112	4.7	—	12,458	12,458
651	Hwy. 101—Missanabie	31.8	165,472	63,722	229,194
652	Wade Lake—Hwy. 574	11.0	15,433	26,143	41,576
653	Portage Du Forte Br.—Hwy. 17	5.5	200	19,842	20,042
654	Hwy. 11—Nipissing	14.2	—	44,811	44,811
655	Timmins—Ward Kidd Twp. Bdry.	13.4	—	28,137	28,137
656	Hwy. 533 Northerly	2.6	—	2,069	2,069
657	Goldpines—Hwy. 105	3.7	345	3,853	4,198
658	Hwy. 17—Fairbank Prov. Park	12.2	14,053	35,223	49,276
659	Hwy. 604—Hwy. 128.	12.3	6,949	21,918	28,867
660	Bala—Hwy. 103	11.4	594,998	34,162	629,160
661	Gogama—Hwy. 144	3.4	—	6,549	6,549
Total Expenditure Allocated to Secondary Highways			\$ 11,014,106	\$ 7,649,036	\$ 18,663,142

DEPARTMENT OF HIGHWAYS, ONTARIO

Hwy No	Location	Mileage	Construction	Maintenance	Total
Tertiary Roads					
800	Hwys. 11 and 17—Cheeseman Lake	63.5	\$ 56,762	\$ 68,914	\$ 125,676
801	Hwy. 11—Namewanimikan River	8.8	—	5,592	5,592
802	Hwy. 11—Burchell Lake	8.5	—	1,488	1,488
804	Hwy. 105—Lower Manitou Falls	12.8	588	4,753	5,341
805	Hwy. 539A (River Valley)—Pond Lake	35.0	35,973	40,137	76,110
806	Hwy. 545—Sellwood	4.2	4,658	9,753	14,411
807	Smooth Rock Falls—Fraserdale	44.0	12,829	49,005	61,834
808	Hwy. 646—Otoskwin River	36.0	2,551	920	3,471
Total Expenditure Allocated to Tertiary Roads			\$ 113,361	\$ 180,562	\$ 293,923
Access and Industrial Roads					
Algoma—Nordic Mine Road			—	\$ 360	\$ 360
Caramat-Manitouwadge			—	19,089	19,089
Denison Mine Road			—	78	78
E. A. Wicks Road			—	18,455	18,455
Panel Mine Road			—	334	334
Sherman Mine Road			—	1,824	1,824
Stanrock Mine Road			—	405	405
Total Expenditure Allocated to Access and Industrial Roads			—	\$ 40,545	\$ 40,545
Unincorporated Township Roads					
Statute Labour Board			\$ 134,455	\$ 197,293	\$ 331,748
Local Roads Board			733,470	1,084,510	1,817,980
Special—Settlers			57,068	44,945	102,013
Indian Reserves			—	24,075	24,075
Total Expenditure Allocated to Unincorporated Township Roads			\$ 924,993	\$ 1,350,823	\$ 2,275,816
Other Programs:					
Belfield Expressway (Metro Toronto)			\$ 632,141	—	\$ 632,141
Brantford Expressway			576,427	—	576,427
Carleton St. Tunnel (St. Catharines)			3,781	—	3,781
E. C. Row Expressway (Windsor)			2,048,311	—	2,048,311
International Airport Road (Metro Toronto)			88	\$ 19,648	\$ 19,736
Main Street East Tunnel (Welland)			582,425	—	582,425
Niagara Freeway			6,724	—	6,724
Queensway (Ottawa)			8,712	126,349	135,061
Thorold Tunnel			375,205	—	375,205
Connecting Links			12,711,958	645,992	13,357,950
Development Roads			19,107,747	328,087	19,435,834
Ferries			14,315	1,020,939	1,035,254
Lands and Buildings			761,833	43,703	805,536
Sidewalks			72,056	—	72,056
Weigh Scales			2,390	16,146	18,536
Total Expenditure Allocated to Other Programs			\$ 36,904,113	\$ 2,200,864	\$ 39,104,977
Highway Totals			\$206,217,816	\$ 52,600,040	\$258,817,856
Sundry Unallocated, District Office Administration, Engineering, Building, Inventory Charges, etc.			\$ 2,114,977	\$ 11,118,404	\$ 13,233,381
Total Expenditures			\$208,332,793	\$ 63,718,444	\$272,051,237



It may resemble the approaches to the Roman Forum, but it is actually pre-cast beams erected during construction of the Fruitland Interchange on the Queen Elizabeth Way.



Far to the north, men working out of mobile living quarters, right, begin grading operations on a Resources Access Road north of Highway 125 in the Kenora District.

Summary
(Government su

	Roads		Bridges and Cul	
	Construction	Maintenance	Construction	
Brant	\$ 718,943	\$ 161,428	\$ 148,005	\$\$
Bruce	616,670	216,710	269,398	
Dufferin	339,298	178,100	41,324	
Elgin	704,044	251,091	592,075	
Essex	993,450	385,432	349,554	
Frontenac	347,260	150,268	68,094	
Grey	717,293	474,945	145,470	
Haldimand	768,705	125,315	75,518	
Haliburton	37,075	660	—	
Halton	1,436,514	218,952	61,405	
Hastings	375,322	260,491	84,069	
Huron	630,754	377,837	243,546	
Kent	1,038,968	367,991	174,902	
Lambton	1,274,742	338,223	193,729	
Lanark	356,954	192,081	145,661	
Leeds and Grenville	635,252	268,907	61,277	
Lennox and Addington	190,412	151,319	82,134	
Lincoln	852,088	295,875	20,679	
Middlesex	1,072,317	348,040	510,735	
Norfolk	1,006,653	389,515	243,419	
Northumberland and Durham	933,509	356,702	762,348	
Ontario	1,512,262	468,469	390,987	
Oxford	743,598	302,365	173,633	
Peel	2,156,400	506,192	715,802	
Perth	548,044	210,637	127,812	
Peterborough	523,137	253,841	349,659	
Prescott and Russell	434,255	173,115	527,290	
Prince Edward	205,410	160,615	34,863	
Renfrew	374,765	324,240	220,977	
Simcoe	1,166,732	340,193	266,191	
Stormont, Dundas and Glengarry	762,919	334,221	155,461	
Victoria	259,047	352,779	146,254	
Waterloo	622,256	470,242	112,924	
Welland	981,213	429,239	191,469	
Wellington	745,585	264,429	218,285	
Wentworth	1,155,871	279,555	112,621	
York	1,677,235	757,291	441,787	
Regional Municipality of Ottawa-Carleton	338,809	1,504,188	17,263	
Total	\$29,253,761	\$12,641,493	\$ 8,476,620	
Metropolitan Toronto				
Roads	25,027,316	5,230,567	2,387,026	
Subway	12,738,742	—	—	
Total	\$67,019,819	\$17,872,060	\$10,863,646	

Expenditures 1970 Fiscal Year)

ter rol ance	Approved Expenditure			Government subsidy 50% and 80%
	Construction	Maintenance	Total	
977	\$ 866,948	\$ 211,995	\$ 1,078,943	\$ 587,347
312	886,068	368,994	1,255,062	713,209
347	380,622	246,222	626,844	329,158
783	1,296,119	380,485	1,676,604	1,025,663
009	1,343,004	451,282	1,794,286	1,012,838
779	415,354	267,230	682,584	366,203
764	862,763	675,628	1,538,391	821,507
565	844,223	145,139	989,362	518,526
	37,075	660	37,735	20,986
555	1,497,919	317,576	1,815,495	932,886
347	459,391	339,923	799,314	429,901
408	874,300	571,291	1,445,591	802,823
319	1,213,870	456,788	1,670,658	900,161
056	1,468,471	408,472	1,876,943	1,002,071
422	502,615	289,700	792,315	443,660
706	696,529	344,493	1,041,022	547,117
445	272,546	193,169	465,715	258,979
166	872,767	368,041	1,240,808	630,889
401	1,583,052	489,980	2,073,032	1,194,511
274	1,250,072	498,149	1,748,221	954,268
169	1,695,857	524,118	2,219,975	1,343,804
554	1,903,249	686,080	2,589,329	1,422,957
196	917,231	412,934	1,330,165	724,069
230	2,872,202	719,874	3,592,076	2,022,423
366	675,856	291,193	967,049	528,756
491	872,796	332,999	1,205,795	712,007
037	961,545	335,383	1,296,928	817,702
500	240,273	213,124	453,397	239,314
351	595,742	413,890	1,009,632	580,492
431	1,432,923	493,003	1,925,926	1,046,480
186	918,380	473,279	1,391,659	752,621
703	405,301	498,576	903,877	502,108
014	735,180	649,818	1,384,998	747,893
567	1,172,682	536,000	1,708,682	916,624
373	963,870	420,981	1,384,851	764,647
430	1,268,492	443,091	1,711,583	895,670
714	2,119,022	1,153,616	3,272,638	1,777,900
306	356,072	2,153,705	2,509,777	1,277,014
453	\$37,730,381	\$17,776,881	\$55,507,262	\$30,565,184
375	\$27,414,342	\$ 8,500,000	\$35,914,342	\$17,957,171
	12,738,742	—	12,738,742	4,246,247
328	\$77,883,465	\$26,276,881	\$104,160,346	\$52,768,602

APPENDIX No. 5

Mileage of Urban Road Surfaces at the End of 1969

Roads under Local Authority

Counties	Legally open	Earth graded and drained	Gravel or stone	Light bitu- minous	Asphalt concrete	Cement concrete	Other	Total
Brant	—	—	39.2	62.8	84.5	18.2	—	204.7
Bruce	10.0	8.4	48.6	60.4	28.5	—	—	155.9
Dufferin	1.0	1.2	10.2	0.5	23.3	1.7	—	37.9
Elgin	11.0	1.4	21.3	52.0	43.4	2.6	1.1	132.8
Essex	13.4	24.3	78.4	95.0	200.0	302.6	4.0	717.7
Frontenac	0.3	0.7	—	15.2	89.0	0.3	—	105.5
Grey	0.5	22.3	36.4	72.3	32.7	2.3	—	166.5
Haldimand	14.4	3.7	23.5	22.4	18.5	—	—	82.5
Halton	39.1	—	137.2	271.6	202.8	10.3	—	661.0
Hastings	0.5	4.1	20.4	96.3	25.5	0.7	—	147.5
Huron	2.7	1.5	50.8	38.6	31.0	—	—	124.6
Kent	6.1	8.4	35.9	32.8	153.0	3.9	—	240.1
Lambton	8.7	1.8	75.1	71.7	85.3	8.3	—	250.9
Lanark	28.1	0.3	26.8	23.9	44.4	0.8	—	124.3
Leeds and Grenville	4.5	2.2	21.0	30.2	80.7	4.8	—	143.4
Lennox and Addington	0.2	—	4.1	16.6	5.8	—	—	26.7
Lincoln	2.4	7.9	27.7	213.1	99.0	56.5	—	406.6
Middlesex	16.9	0.2	112.6	210.7	207.5	0.3	—	548.2
Norfolk	2.2	3.2	13.2	45.5	25.3	0.8	—	90.2
Northumber and Durham	8.3	2.5	46.6	81.7	67.2	5.1	—	211.4
Ontario	23.6	2.0	100.1	113.7	186.8	—	—	426.2
Oxford	3.6	0.8	22.5	59.5	74.1	0.3	—	160.8
Peel	10.7	14.8	60.7	157.6	246.0	—	—	489.8
Perth	10.2	1.3	51.8	54.1	52.1	0.7	—	170.2
Peterborough	8.8	0.5	29.9	80.9	74.3	2.3	—	196.7
Prescott and Russell	3.2	4.1	11.9	15.9	31.9	—	—	67.0
Prince Edward	—	—	2.2	6.3	12.7	0.2	—	21.4
Renfrew	2.0	4.5	43.5	48.3	71.3	—	—	169.6
Simcoe	17.9	12.4	75.2	146.2	147.5	6.5	—	405.7
Stormont, Dundas and Glengarry	2.2	—	29.6	44.6	22.6	50.8	18.0	167.8
Victoria	15.9	2.4	44.3	2.9	29.4	—	—	94.9
Waterloo	13.7	7.6	41.3	213.8	245.2	37.8	—	559.4
Welland	35.2	6.4	56.9	242.5	172.3	4.9	—	518.2
Wellington	10.2	3.8	56.3	93.6	133.5	2.7	—	300.1
Wentworth	10.0	—	11.2	140.6	408.1	1.6	—	571.5
York	2.5	2.9	12.9	49.0	83.2	—	—	150.5
Total Counties	340.0	157.6	1,479.3	2,982.8	3,538.4	527.0	23.1	9,048.2
Metro Toronto Area	3.1	—	4.4	7.7	499.2	5.4	2.8	522.6
Ottawa-Carlton	3.6	9.7	32.5	188.1	324.3	2.3	—	560.5
Districts								
Algoma	37.0	4.9	112.9	29.8	124.0	0.3	0.1	309.0
Cochrane	34.6	7.7	58.9	25.8	48.7	—	—	175.7
Kenora	—	—	56.1	8.5	39.1	0.1	—	103.8
Manitoulin	3.3	2.8	14.8	1.5	—	—	—	22.4
Muskoka	23.9	0.4	38.7	25.5	8.0	—	—	96.5
Nipissing	10.1	1.6	94.1	64.3	101.1	—	—	271.2
Parry Sound	29.2	0.2	33.4	2.2	15.0	—	—	80.0
Rainy River	—	1.1	87.3	21.5	57.4	0.1	0.4	167.8
Sudbury	13.2	3.8	48.2	76.0	158.2	0.3	—	299.7
Timiskaming	—	—	32.4	2.2	20.7	—	—	55.3
Thunder Bay	4.9	1.4	230.8	11.0	166.1	1.3	—	415.5
Total Districts	156.2	23.9	807.6	268.3	738.3	2.1	0.5	1,996.9
Grand Totals	502.9	191.2	2,323.8	3,446.9	5,100.2	536.8	26.4	12,128.2



Construction of the Wabi Creek Bridge on Highway 11B in the town of New Lisheard included building of a walkway for the convenience of pedestrians.



It was business as usual in Huntsville when highway crews moved in during September to resurface the town's main street, which is a section of Highway 11B.

Mileage of Rural Roads

COUNTY ROADS

County	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete
Brant	—	—	16.1	91.3	29.5	—
Bruce	—	—	74.1	118.4	103.3	—
Dufferin	—	—	89.5	8.2	48.2	—
Elgin	—	—	65.9	165.2	67.6	—
Essex	—	—	84.6	63.8	84.5	1.6
Frontenac	—	—	20.6	63.7	65.8	—
Grey	—	—	198.9	128.9	46.7	0.4
Haldimand	0.3	3.2	8.7	161.9	17.3	—
Haliburton	10.5	—	—	—	—	—
Halton	—	—	34.1	73.5	53.7	—
Hastings	—	—	144.9	72.5	12.0	2.1
Huron	—	—	156.6	74.9	106.4	—
Kent	—	0.2	24.5	11.1	352.2	6.6
Lambton	—	—	70.5	51.1	119.7	—
Lanark	—	—	104.6	90.5	33.2	—
Leeds and Grenville	—	—	118.8	153.4	64.0	—
Lennox and Addington	—	—	29.9	97.9	37.1	—
Lincoln	—	0.9	8.4	125.9	36.7	—
Middlesex	—	—	66.2	148.6	171.4	12.0
Norfolk	0.9	4.8	7.2	199.2	30.3	0.6
Northumberland and Durham	—	—	46.3	175.9	122.1	0.4
Ontario	—	—	54.9	78.0	169.8	—
Oxford	—	—	46.5	131.4	43.5	11.6
Peel	2.6	1.2	16.0	69.0	90.8	—
Perth	—	—	44.4	103.4	65.5	—
Peterborough	—	—	89.7	51.9	87.3	—
Prescott and Russell	—	—	103.4	84.7	62.6	—
Prince Edward	—	—	26.8	127.4	42.2	—
Renfrew	—	—	9.3	17.9	188.8	—
Simcoe	—	—	94.6	78.2	167.7	—
Stormont, Dundas and Glengarry	—	—	122.1	219.6	99.2	—
Victoria	—	—	107.2	51.3	44.0	—
Waterloo	—	—	22.2	91.9	106.5	1.9
Welland	2.5	—	4.9	116.0	36.4	—
Wellington	—	0.9	130.7	72.7	98.9	—
Wentworth	—	—	7.2	163.0	1.8	—
York	—	—	17.6	21.4	172.9	—
Total Counties	16.8	11.2	2,267.9	3,553.7	3,079.6	37.2
Metropolitan Roads						
Metropolitan Toronto Area	2.1	—	1.1	3.5	347.2	21.2
Regional Roads						
Ottawa-Carleton	—	—	68.8	119.9	268.2	—
Improvement Districts						
Algoma	—	—	—	—	—	—
Cochrane	—	—	—	—	—	—
Kenora	—	—	—	—	—	—
Manitoulin	—	—	—	—	—	—
Muskoka	—	—	—	—	—	—
Nipissing	—	—	—	—	—	—
Parry Sound	—	—	—	—	—	—
Rainy River	—	—	—	—	—	—
Sudbury	—	—	—	—	—	—
Timiskaming	—	—	—	—	—	—
Thunder Bay	—	—	—	—	—	—
Total Districts	—	—	—	—	—	—
Unorganized Townships	—	—	—	—	—	—
Grand Total	18.9	11.2	2,337.8	3,677.1	3,695.0	58.4

nd of 1969

INCORPORATED — TOWNSHIP ROADS

	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete	Other	Total
6.9	4.7	4.6	433.6	91.0	10.7	—	—	544.6
5.8	76.2	77.2	1,609.9	83.1	11.2	—	—	1,857.6
5.9	50.5	39.5	732.8	8.0	3.2	—	—	834.0
8.7	26.8	28.1	790.2	23.1	2.1	0.5	—	870.8
0.7	8.6	15.9	697.8	151.1	23.4	2.2	16.5	915.5
0.1	102.6	61.0	906.2	85.5	27.3	—	—	1,182.6
4.9	141.4	97.6	1,896.9	45.5	6.1	0.6	—	2,188.1
1.4	22.3	32.8	441.7	89.7	11.7	—	—	598.2
0.5	43.4	27.2	488.6	76.4	1.7	—	—	637.3
1.3	16.4	1.9	216.5	2.5	—	—	—	237.3
1.5	198.9	111.5	1,427.4	58.7	16.6	—	—	1,813.1
7.9	50.6	29.3	1,543.4	18.2	16.3	1.9	—	1,659.7
6.0	3.2	16.4	1,152.6	3.0	24.9	0.4	9.5	1,210.0
9.2	7.4	118.5	1,214.0	65.3	16.0	—	14.0	1,435.2
8.3	102.8	85.8	787.3	43.8	20.6	—	—	1,040.3
8.2	206.3	69.4	951.1	76.9	60.0	—	—	1,363.7
4.9	103.9	71.2	567.1	30.2	15.1	—	—	787.5
1.9	88.3	65.6	376.2	130.6	1.4	1.3	—	663.4
3.2	57.8	23.6	1,564.5	39.4	19.1	0.1	—	1,704.5
3.0	30.9	108.9	486.9	196.4	67.5	—	—	890.6
4.7	464.8	286.5	1,658.8	196.2	36.4	0.4	—	2,643.1
2.7	176.7	100.3	801.3	51.8	62.0	—	—	1,192.1
3.0	16.3	1.2	944.1	18.4	56.1	—	—	1,036.1
9.6	19.9	—	418.9	15.3	72.7	—	—	526.8
3.3	16.3	10.2	989.3	7.8	0.9	—	—	1,024.5
3.9	57.8	46.7	840.9	21.9	3.2	—	—	970.5
0.7	70.9	191.2	619.1	8.4	13.2	—	—	902.8
3.4	25.6	7.5	324.2	22.4	9.2	1.2	—	390.1
3.0	128.6	114.1	1,416.0	12.3	44.1	—	—	1,715.1
0.5	149.7	39.9	1,896.9	250.9	47.5	—	—	2,384.9
2.9	78.4	82.3	1,120.8	44.2	56.9	—	—	1,382.6
2.5	51.4	43.7	911.6	5.8	13.5	—	—	1,026.0
2.5	20.6	2.9	459.4	89.2	9.3	1.4	0.3	583.1
3.8	150.3	161.2	385.6	219.9	16.2	0.4	—	933.6
3.2	49.5	66.5	1,028.4	96.7	13.5	0.1	—	1,254.7
2.0	35.2	17.4	405.7	98.6	5.2	—	—	562.1
1.9	60.4	4.9	721.5	77.8	158.8	—	—	1,023.4
1.9	2,915.4	2,262.5	33,227.2	2,556.0	973.6	10.5	40.3	41,985.5
Borough Roads								
5.1	52.6	49.8	51.8	429.2	1,360.9	5.4	—	1,949.7
Township Roads								
3.9	107.4	27.0	856.2	122.3	165.2	—	—	1,278.1
	205.2	24.0	565.0	1.3	27.9	—	—	823.4
	618.8	40.0	483.2	14.6	21.7	—	6.5	1,184.8
	10.4	1.9	155.3	4.7	0.3	—	—	172.6
	12.9	24.9	373.8	—	1.3	—	—	412.9
	118.6	72.7	669.9	176.3	3.7	—	—	1,041.2
	38.4	7.0	429.6	15.4	15.3	—	—	505.7
	96.6	41.1	1,133.3	32.5	21.7	—	—	1,325.2
	24.2	46.3	535.9	0.6	—	—	—	607.0
	45.2	170.8	711.6	25.7	32.8	—	—	986.1
	33.5	—	583.9	34.1	15.5	—	—	667.0
	55.1	30.4	514.0	49.1	52.5	—	—	701.1
	1,258.9	459.1	6,155.5	354.3	192.7	—	6.5	8,427.0
	140.2	871.7	4,476.1	2.3	2.5	—	4.0	5,496.8
3.9	4,474.5	3,670.1	44,766.8	3,464.1	2,694.9	15.9	50.8	59,137.1

APPENDIX No. 7

Road Mileages in Ontario
As of March 31, 1970

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
King's	393.5	7,986.3	1,017.0	499.6	9,896.4
Secondary	—	207.7	794.9	1,993.4	2,996.0
Tertiary	—	4.2	—	211.8	216.0
Total	393.5	8,198.2	1,811.9	2,704.8	13,108.4

APPENDIX No. 8

Summary of King's Highway Mileage
As of March 31, 1970

Chatham	78.6	514.2	19.4	9.7	621.9
London	51.7	530.4	13.4	—	595.5
Stratford	6.3	632.7	1.0	8.9	648.9
Hamilton	82.5	513.3	35.9	4.7	636.4
Owen Sound	15.5	553.0	18.8	21.6	608.9
Toronto	28.0	410.1	57.0	3.3	498.4
Port Hope	8.2	487.7	55.4	—	551.3
Kingston	63.4	567.0	97.6	5.8	733.8
Ottawa	59.3	565.0	42.2	2.6	669.1
Bancroft	—	172.1	172.6	24.4	369.1
Huntsville	—	286.5	86.7	25.3	398.5
North Bay	—	322.8	63.7	33.3	419.8
New Liskeard	—	276.5	138.0	106.8	521.3
Cochrane	—	328.3	7.1	15.5	350.9
Sudbury	—	312.0	2.8	90.5	405.3
Sault Ste Marie	—	396.9	139.0	72.2	608.1
Thunder Bay	—	617.2	20.1	15.2	652.5
Kenora	—	500.7	46.3	59.7	606.7
Total	393.5	7,986.4	1,017.0	499.5	9,896.4

APPENDIX No. 9

Summary of Secondary Highway Mileages

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Owen Sound	—	0.4	0.2	7.5	8.1
Toronto	—	—	—	—	—
Port Hope	—	12.3	44.4	27.4	84.1
Kingston	—	7.4	14.1	0.5	22.0
Ottawa	—	—	37.2	10.4	47.6
Bancroft	—	14.4	129.2	136.8	280.4
Huntsville	—	14.8	176.4	71.7	262.9
North Bay	—	8.0	107.1	102.1	217.2
New Liskeard	—	40.6	87.7	190.0	318.3
Cochrane	—	5.3	40.2	158.5	204.0
Sudbury	—	43.9	56.5	304.7	405.1
Sault Ste Marie	—	39.2	57.2	200.4	296.8
Thunder Bay	—	14.1	36.5	442.2	492.8
Kenora	—	7.3	8.2	341.2	356.7
Total	—	207.7	794.9	1,993.4	2,996.0

APPENDIX No. 10

Summary of Tertiary Road Mileage

North Bay	—	—	—	35.0	35.0
New Liskeard	—	—	—	3.2	3.2
Cochrane	—	—	—	44.0	44.0
Sudbury	—	4.2	—	—	4.2
Sault Ste Marie	—	—	—	—	—
Thunder Bay	—	—	—	116.8	116.8
Kenora	—	—	—	12.8	12.8
Total	—	4.2	—	211.8	216.0

APPENDIX No. 11

Types of Surface on the King's Highways
As of March 31, 1970

County or District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Algoma	—	362.5	90.2	49.2	501.9
Brant	18.5	62.3	6.3	4.7	91.8
Bruce	4.8	126.6	18.8	15.5	165.7
Cochrane	—	338.9	48.5	17.0	404.4
Dufferin	0.4	77.5	1.0	—	78.9
Elgin	36.3	108.1	—	—	144.4
Essex	15.0	171.8	19.4	—	206.2
Frontenac	4.3	130.2	41.5	—	176.0
Grey	4.7	148.9	—	9.5	163.1
Haldimand	—	70.1	2.3	—	72.4
Haliburton	—	64.3	49.9	5.6	119.8
Halton	14.3	71.5	2.4	—	88.2
Hastings	5.8	196.4	58.4	—	260.6
Huron	—	204.1	—	—	204.1
Kenora	—	410.7	27.7	59.7	498.1
Kent	43.1	174.7	—	3.8	221.6
Lambton	20.5	167.7	—	5.9	194.1
Lanark	—	99.7	9.4	—	109.1
Leeds-Grenville	28.4	229.6	15.8	5.8	279.6
Lennox-Addington	26.5	97.4	27.3	—	151.2
Manitoulin	—	25.8	—	28.8	54.6
Middlesex	15.2	208.6	—	—	223.8
Muskoka	—	151.1	38.5	6.9	196.5
Niagara	43.2	147.1	0.6	—	190.9
Nipissing	—	246.8	78.2	26.8	351.8
Norfolk	—	71.1	13.4	—	84.5
Northumberland-Durham	—	255.5	12.5	—	268.0
Ontario	—	148.5	9.3	—	157.8
Ottawa-Carleton	14.7	114.8	—	2.6	132.1
Oxford	4.5	139.6	—	—	144.1
Parry Sound	—	145.4	35.6	12.8	193.8
Peel	1.9	107.0	9.2	—	118.1
Perth	—	138.0	—	—	138.0
Peterborough	—	83.6	27.3	12.8	123.7
Prescott-Russell	—	59.0	—	—	59.0
Prince Edward	8.2	43.7	4.8	—	56.7
Rainy River	—	193.5	18.6	—	212.1
Renfrew	—	221.5	81.3	7.6	310.4
Simcoe	6.0	296.1	6.4	—	308.5
Stormont, Dundas and Glengarry	43.0	167.0	3.8	—	213.8
Sudbury	—	273.0	65.3	149.3	487.6
Thunder Bay	—	634.7	20.1	15.2	670.0
Timiskaming	—	165.9	91.3	51.2	308.4
Victoria	—	114.4	35.8	—	150.2
Waterloo	5.0	83.0	—	—	88.0
Wellington	9.6	150.9	—	8.9	169.4
Wentworth	—	126.6	24.3	—	150.9
York	19.6	161.1	21.8	—	202.5
Total	393.5	7,986.3	1,017.0	499.6	9,896.4

APPENDIX No. 12

Types of Surface on the Secondary Highways

County or District	High class Bituminous	Low class Bituminous	Gravel	Earth	Total
Algoma	21.8	39.5	311.8	—	373.1
Cochrane	34.2	51.9	108.0	—	194.1
Frontenac	—	15.8	19.3	—	35.1
Haliburton	6.1	65.7	27.6	—	99.4
Hastings	3.3	21.9	15.1	—	40.3
Kenora	7.3	8.2	164.6	—	180.1
Lanark	—	14.0	—	—	14.0
Lennox-Addington	4.9	7.0	—	—	11.9
Manitoulin	—	39.3	133.0	—	172.3
Muskoka	11.6	62.4	30.0	—	104.0
Nipissing	4.6	32.4	51.4	—	88.4
Ontario	—	—	1.9	—	1.9
Parry Sound	3.6	156.2	94.5	—	254.3
Peterborough	6.6	35.1	28.9	—	70.6
Rainy River	3.1	10.5	213.4	—	227.0
Renfrew	8.8	57.4	52.3	—	118.5
Sudbury	45.7	24.8	165.1	—	235.6
Thunder Bay	28.4	44.5	428.7	2.4	504.0
Timiskaming	11.7	76.0	120.3	—	208.0
Victoria	6.0	32.3	25.1	—	63.4
Total	207.7	794.9	1,991.0	2.4	2,996.0

APPENDIX No. 13

Types of Surface on the Tertiary Roads

Cochrane	—	—	44.0	—	44.0
Kenora	—	—	12.8	—	12.8
Nipissing	—	—	35.0	—	35.0
Sudbury	4.2	—	—	—	4.2
Thunder Bay	—	—	116.8	—	116.8
Timiskaming	—	—	3.2	—	3.2
Total	4.2	—	211.8	—	216.0

APPENDIX No. 14

Schedule of Controlled Access Roads
April 1, 1969 to March 31, 1970

Highway	Location	Designation by Ontario regulation number	Mileage
Hanlon Expressway	Twps. of Guelph and Puslinch and Town of Guelph	136/69	6.40
3	Essex By-Pass	183/69	6.50
Brantford			
Expressway No. 2	Twp. of and City of Brantford	294/69	6.50
417	Antrim to Quebec Boundary	338/69	43.60
138	Cornwall to Monkland	371/69	3.50
Belfield	Twp. of Chinguacousy and		
Expressway	Town of Brampton	459/69	0.75
140	Port Colbourne to Allanburg	459/69	6.60
416	Southwest Freeway (Ottawa)	488/69	0.70
417	Antrim to Quebec Boundary	63/70	19.00
10	Orangeville By-Pass	93/70	1.80
3	Leamington Diversion	93/70	8.80
7116	Bloomfield Road (Twp. of Raleigh)	93/70	2.01
11	Bracebridge to Huntsville	372/69	8.70
11	Huntsville to Burk's Falls	481/69	17.84
11	Burk's Falls By-Pass	128/70	3.04
400	Interchange at Sheppard Ave.	128/70	0.22
17	Twp. of East Hawkesbury	339/69	3.30
17	Hwy. 17 Diversion (Twp. of McNab)	489/69	3.00
Total Mileage			142.26

APPENDIX No. 15

Schedule of existing roads assumed as portions of the King's Highway, Secondary Highway and Tertiary Road Systems for the fiscal year ending March 31, 1970

County, district or regional mun.	Plan no.	Township	Effective date	Hwy. no.	Miles
Algoma	P-8147-4	Hunt	May 16/69	631	0.620
	P-8147-5	Hunt	May 16/69	631	0.530
Cochrane	P-2242-39	Bowman and Carr	Jan. 14/70	101	0.920
	P-2322-63	Calvert and Teefy	Feb. 23/70	67	1.210
Essex	P-4078-7	Colchester N.	May 26/69	3	0.670
	P-4088-5	Maidstone, Colchester N., Sandwich S. Gosfield N.	Jan. 2/70	3	4.500
Grenville	P-2816-61	Edwardsburgh	May 14/69	401	0.110
	P-6075-26	Oxford	Sept. 8/69	416	0.800
Grey	P-1984-32	Artemesia	June 19/69	4	0.250
Hastings	P-1561-69	Sidney	Jan. 26/70	2	0.100
Kenora	P-3289-8	Woodyatt	July 16/69	602	0.940
Kent	P-4082-5	Raleigh, City of Chatham	Jan. 6/70	7116	0.440
Lambton	P-2311-94	City of Sarnia	Aug. 12/69	402	0.019
	P-2311-98	Sarnia	Sept. 16/69	402	0.170
	P-2311-101	Sarnia	Dec. 1/69	402	0.019
Leeds	P-3095-139	Elizabethtown	Sept. 4/69	401	0.590
Niagara	P-1915-117	City of Niagara Falls	Feb. 24/70	Q.E.W.	0.235
	P-5085-11	Crowland	Apr. 23/69	East Main Street	1.100
Norfolk	P-1896-6	Middleton	Sept. 5/69	19	0.076
	P-2688-17	Middleton	June 16/69	59	0.110
Ontario	P-2269-35	Uxbridge	Sept. 10/69	47	0.500
Ottawa-Carleton	P-3017-129	Gloucester	Aug. 21/69	17ETC	0.390
Parry Sound	P-7063-13	Perry	Apr. 16/69	518	0.850
Peterborough	P-2347-35	Anstruther	Apr. 21/69	28	0.280
Renfrew	P-1823-17	NcMab	Aug. 26/69	17	0.260
	P-1888-30	Town of Renfrew	Nov. 26/69	17	0.009
Simcoe	P-1904-94	Nottawasaga	June 13/69	26	0.190
	P-1920-56	Town of Midland	June 16/69	12	0.100
	P-3202-5	Orillia	July 24/69	69	0.076
Stormont	P-3147-84	Cornwall	Apr. 1/69	401	0.057
Waterloo	P-1791-98	Waterloo	Dec. 2/69	7	0.038
Wellington	P-1643-76	Puslinch	Nov. 28/69	6	0.038
	P-1735-20	Guelph	Nov. 28/69	6	0.570
York	P-2800-64	Georgina	Dec. 10/69	48	0.360

APPENDIX No. 16

Schedule of designations and re-designations of sections of the King's Highway, Secondary Highway and Tertiary Road Systems for the fiscal year ending March 31, 1970

County, district or regional mun.	Plan no.	Township	Effective date	Hwy. no.	Miles
Algoma	P-2989-1	8D and 8E	May 29/69	129	6.44
	P-2991-1	7D	May 29/69	129	6.75
	P-2992-1	6D	May 29/69	129	6.34
	P-2993-1	4D	May 29/69	129	4.38
	P-2994-1	5D	May 29/69	129	7.05
	P-3138-3	Gould	May 29/69	129	10.46
	P-3223-8	27, Range 23 and 28, Range 23	May 1/69	101	11.31
	P-3224-5	26, Range 23	May 1/69	101	6.71
	P-3228-5	Hoey and Triquet	May 1/69	101	7.08
	P-3230-5	Peters	Apr. 24/69	101	6.31
	P-3235-2	32	Apr. 24/69	101	7.50
	P-3502-1	2F	May 22/69	129	6.94
	P-3507-1	9D	May 29/69	129	6.22
	P-7022-1	1F	May 29/69	129	9.53
	P-7024-1	10D and 10E	May 29/69	129	6.12
	P-7038-3	Chapleau	May 8/69	101	4.52
	P-7050-3	188	May 29/69	129	7.82
	P-8012-7	29, Range 23	May 8/69	101	5.31
	P-8052-2	29, Range 24	Apr. 24/69	101	1.64
	P-8054-6	28, Range 24	Apr. 24/69	101	7.84
	P-8066-2	Cosens	Apr. 24/69	101	4.75
	P-8076-2	24, Range 22	May 1/69	101	6.75
	P-8077-1	24, Range 23	May 1/69	101	1.90
	P-8078-1	25, Range 22	Apr. 24/69	101	1.32
	P-8079-2	25, Range 23	May 1/69	101	6.32
Brant	P-3275-26	Brantford and Onondaga	Jan. 22/70	54	0.91
	P-5041-24	Brantford	Aug. 28/69	403	6.35
	P-5089	Brantford	May 1/69	Brantford Expy. #2	6.50
Carleton	P-1648-13	March	Dec. 23/69	17	0.55
Cochrane	P-2570-18	Dundonald (Mun. of Calvert)	May 22/69	67	5.50
	P-3331-22	Kendall	Dec. 23/69	583	1.51
Dufferin	P-1835-55	Mono	Nov. 13/69	10	1.30
	P-2449-23	Melancthon	Oct. 16/69	24	1.20
Elgin	P-2009-21	Dunwich	Nov. 6/69	3	9.70
Essex	P-4078-2	Gosfield N., Colchester N. and Maidstone	Apr. 24/69	3	6.50
	P-4088-6	Gosfield N. and Gosfield S.	Jan. 15/70	3	5.91
	P-4095	Mersea and Gosfields	Nov. 27/69	3	8.80
	P-2055-46	Olden and Oso	June 12/69	38	5.05
Frontenac	P-6079	Kenyon and Lochiel	May 22/69	417	12.50
Glengarry	P-6073-29	Edwardsburgh	Nov. 6/69	416	0.70
Grenville	P-1926-62	Thurlow	Oct. 16/69	37	7.80
Hastings	P-2299-10	Spohn	Dec. 23/69	600	7.63
Kenora	P-2325-63	Unsurveyed Territory	Aug. 13/69	17TC	3.24
	P-2334-40	Drayton and Town of Sioux Lookout and Grand Trunk Pacific, Block 10	Oct. 30/69	72	6.56
	P-2502-3	Sanford (Mun. of Machin)	Aug. 13/69	594	1.03
	P-2701-12	McCrosson (Mun. of McCrosson and Tovell)	Feb. 12/70	600	6.13

County, district or regional mun.	Plan no.	Township	Effective date	Hwy. no.	Miles
	P-2824-11	Aylsworth			
	P-3524-3	(Mun. of Emo)	Feb. 13/70	602	6.120
Kent	P-2853-6	Rowell	Aug. 21/69	119	1.630
	P-4082-2	Camden	Mar. 13/69	78	3.400
Lambton	P-4092	Raleigh	Nov. 6/69	7116	2.010
		Sandwich S., and Village of Point Edward	Oct. 16/69	40B	0.250
Lanark	P-1796-43	Beckwith	Oct. 16/69	7 and 15TC	4.800
	P-1880-29	Bathurst	July 17/69	7TC	11.940
Lennox and Addington . .	P-2068-15	Adolphustown	June 12/69	33	4.900
	P-2099-12	S. Fredericksburg	July 17/69	33	9.540
Manitoulin	P-2170-33	Great Cloche Is.	Nov. 13/69	68	7.950
Muskoka	P-2119-100	Chaffey	Oct. 16/69	11	4.630
	P-2121-19	Stephenson	July 10/69	11	6.830
	P-2184-14	Brunel	July 10/69	11	1.870
Niagara	P-1653-43	Humberstone and Bertie	Oct. 16/69	3	6.900
	P-2114-146	N. Grimsby and Town of Grimsby	May 22/69	Q.E.W.	6.050
	P-2115-88	Clinton	May 22/69	Q.E.W.	5.950
	P-2116-123	Louth and City of St. Catharines	May 22/69	Q.E.W.	6.100
	P-2425-110	City of Niagara Falls	Mar. 6/69	Rainbow Bridge Cut-off	0.076
	P-5085-11	Crowland	Apr. 24/69	East Main St.	1.100
Nipissing	P-5088-4	Humberstone	Sept. 18/69	140	4.500
	P-2169-38	Murchison	May 22/69	60	5.840
	P-2186-59	Calvin	Aug. 28/69	17	9.190
	P-2785-118	Widdifield	Mar. 26/70	N.B.B.P.	0.320
	P-2827-7	Sproule	July 17/69	60	10.160
	P-3538-16	Canisbay	Aug. 21/69	60	7.356
	P-7108-2	Boulter	July 10/69	630	0.700
	P-7112-7	Lauder	July 17/69	630	8.000
Ontario	P-2269-36	Uxbridge	Oct. 16/69	47	1.180
	P-5061-5	Thorah	Apr. 17/69	488	4.030
Ottawa-Carleton	P-1696-46	Goulbourn	Oct. 16/69	7 and 15TC	3.000
	P-2684-75	Nepean	Oct. 16/69	7 and 15TC	5.000
	P-6077	Cumberland	May 1/69	417	6.550
	P-6077-1	Cumberland	Nov. 25/69	417	19.000
Oxford	P-2081-39	Blandford	Feb. 19/70	2	—
Parry Sound	P-2127-87	Armour	Oct. 16/69	11	4.340
	P-2127-88	Armour	Oct. 30/69	11	3.040
	P-2127-89	Armour	Oct. 30/69	11	0.140
	P-2127-91	Armour	Feb. 19/70	11	2.740
	P-2130-79	South Himsforth	Feb. 19/70	11	6.440
	P-2238-47	Laurier	Feb. 19/70	11	6.660
	P-2289-69	Strong	Feb. 19/70	11	11.940
	P-2373-27	Machar	Feb. 19/70	11	3.880
	P-2394-53	Perry	Oct. 16/69	11	8.870
	P-7063-13	Perry	May 8/69	518	0.850
Peel	P-3108-101	Town of Mississauga	Apr. 24/69	401	0.550
Peterborough	P-5056-28	Smith	May 8/69	507	11.800
Prescott	P-1981-43	E. Hawkesbury	Aug. 19/69	17TC	3.260
	P-6078	E. Hawkesbury	June 12/69	417	6.118
	P-6080	Caledonia and S. Plantagenet	May 22/69	417	10.050

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Miles
Renfrew	P-1823-18	McNab	Dec. 11/69	17	3.00
	P-2201-61	N. Algona	Aug. 13/69	60	8.08
	P-2202-34	Hagarty	July 17/69	60	6.80
	P-2554-23	Bagot	Jan. 22/70	508	11.00
	P-2617-54	Sherwood	July 17/69	60	6.75
	P-2655-44	Wilberforce	Aug. 13/69	60	8.84
	P-2799-7	Stafford	Aug. 13/69	62	0.86
	P-2819-33	Alice	Sept. 11/69	62	10.00
Russell	P-6021-17	Bromley	Sept. 4/69	60	8.00
	P-6077	Russell and Cambridge	(See Reg. Mun. of Ottawa-Carleton)		
	P-6077-1	Russell and Cambridge	(See Reg. Mun. of Ottawa-Carleton)		
Stormont	P-6065-20	Cornwall	July 10/69	138	3.25
	P-6065-21	Cornwall	Feb. 12/70	138	4.45
	P-6071-3	Roxborough	Feb. 12/70	138	2.65
	P-6080	Roxborough	(See Prescott County)		
Timiskaming	P-7217	Pacaud	Oct. 16/69	809	0.25
	P-7218	Catharine	Oct. 16/69	809	2.00
Victoria	P-1964-35	Verulam and Village of Bobcaygeon	Aug. 28/69	36	11.00
	P-3570-13	Laxton	Apr. 28/69	503	7.83
	P-1549-51	Wilmot	Dec. 23/69	7	4.70
Waterloo	P-1643-72	Puslinch	Apr. 17/69	6	2.50
Wellington	P-2113-331	Saltfleet	May 22/69	Q.E.W.	5.80
Wentworth	P-1716-115	Vaughan	Aug. 28/69	7	5.50
York	P-2083-332	Borough of Etobicoke	Nov. 13/69	27	1.82
	P-2082-335	Borough of Etobicoke	Apr. 17/69	27	0.70
	P-2760-65	Borough of North York	Dec. 4/69	400	0.22
	P-2948-151	Borough of Etobicoke	Apr. 24/69	401	0.80
	P-5047-20	Borough of Etobicoke	Apr. 17/69	427	0.46

APPENDIX No. 17

Schedule of reversions and transfers of sections of the King's Highway and Secondary Highway Systems for the fiscal year ending March 31, 1970

County, district or regional mun.	Plan no.	Township	Effective date	Hwy. no.	Miles
Algoma	P-3362-10	Plummer			
		Additional	May 31/69	561	0.300
Bruce	P-2277-55	Albemarle and			
		Amabel	Sept. 30/69	6	0.090
Cochrane	P-2242-40	Bowman and Carr	Feb. 26/70	101 and 626	0.920
Dundas	P-1925-35	Matilda	Sept. 4/69	21	0.540
	P-2451-39	Winchester	Sept. 20/69	43	1.340
Durham	P-1680-33	Town of			
		Bowmanville	Apr. 1/69	2	0.790
Essex	P-3020-165	Rochester and			
		Maidstone	Mar. 5/70	401	0.380
Glengarry	P-3050-26	Lancaster	Sept. 4/69	2	8.900
	P-3126-100	Charlottenburgh	Oct. 11/69	401	2.200
Grey	P-1671-57	Town of Thornbury	Oct. 16/69	26	0.200
Haldimand	P-1818-25	Village of Jarvis	June 7/69	3	0.940
	P-2046-32	Village of Jarvis	Aug. 16/69	6	1.290
Halton	P-1715-60	Town of Acton	Sept. 18/69	7	0.310
	P-1957-44	Town of			
		Burlington	Oct. 16/69	2	8.500
	P-2792-56	Town of			
		Burlington	Sept. 18/69	403	3.200
Hastings	P-1949-45	Madoc	July 1/69	7	1.910
	P-2197-29	Bangor	Apr. 1/69	63	0.470
	P-2521-30	Dungannon	Sept. 20/69	500	0.250
	P-3340-7	Wicklow	June 1/69	127	0.180
	P-3340-8	Wicklow	Sept. 4/69	127	0.250
Huron	P-1830-14	Town of Wingham	June 28/69	4	0.200
Kent	P-2942-42	Zone	May 24/69	79	0.104
Lambton	P-2359-23	Town of Forest	Nov. 1/69	21	0.350
Lanark	P-1696-43	Beckwith	Apr. 1/69	15	9.120
	P-6030-3	Drummond	Apr. 1/69	43	0.400
	P-6072	Beckwith	Apr. 1/69	7	0.580
Leeds	P-2013-50	Elizabethtown	Apr. 1/69	2	0.027
	P-3337-18	Leeds	Aug. 21/69	2	0.290
Lennox and Addington	P-2860-20	Richmond	Apr. 1/69	41	0.460
	P-3403-5	Town of Napanee	Nov. 1/69	502	0.580
	P-6026-51	Kaladar	May 31/69	41	3.820
Manitoulin	P-7085-2	Carnarvon	Apr. 1/69	551	0.270
Middlesex	P-3053-165	Westminster	July 19/69	401	1.570
	P-3053-166	Westminster	Oct. 16/69	401	—
Muskoka	P-2326-45	Watt	Mar. 26/70	532	0.160
	P-3299-3	Draper	Nov. 1/69	532	0.020
	P-3301-5	Muskoka	Nov. 1/69	532	0.020
	P-7000-9	Stephenson	Mar. 26/70	532	0.420
Niagara	P-2085-6	City of Welland	Aug. 16/69	58	1.560
	P-3381-33	Niagara	Oct. 2/69	8	4.200
Nipissing	P-2257-96	Widdifield	Feb. 21/70	63	0.400
	P-2257-97	Widdifield	Feb. 21/70	63	1.650
	P-2393-20	Strathcona	Apr. 1/69	11	4.800
	P-2500-27	Widdifield	Feb. 21/70	123	4.890
	P-3417-18	Caldwell	Apr. 1/69	64	0.100
Norfolk	P-1747-47	Townsend	July 12/69	24	4.140
	P-1747-48	Townsend	Oct. 2/69	24	6.070
	P-4045-14	Windham	June 7/69	24A	0.310
Northumberland	P-1761-43	Seymour	Dec. 30/69	30	0.460
Ottawa-Carleton	P-1666-40	Fitzroy and			
		Huntley	Apr. 1/69	17	4.400
	P-1696-43	Goulbourn	(See Lanark County)		
	P-1770-30	Fitzroy and			
		Huntley	Apr. 1/69	17	7.376
	P-1937-43	Gloucester	Apr. 1/69	17	0.520
Oxford	P-2378-50	E. Zorra	July 12/69	59	0.150
	P-2378-51	Blandford	Sept. 12/69	59	0.010

County, district or regional area	Plan no.	Township	Effective date	Hwy. no.	Mile
Peterborough	P-2757-18	Harvey	May 1/70	28	0.0
	P-2960-12	Belmont	Sept. 18/69	30	0.6
Prescott	P-1768-28	Longueuil	Apr. 1/69	17	1.2
	P-1867-24	Village of Plantagenet	Apr. 1/69	17	1.4
	P-1867-25	N. Plantagenet	Apr. 1/69	17	7.8
	P-1981-42	E. Hawkesbury	Apr. 1/69	17	8.1
	P-2076-24	W. Hawkesbury	Apr. 1/69	17	1.0
	P-2076-25	Town of Hawkesbury	Apr. 1/69	17	0.1
Renfrew	P-2201-62	N. Algona	Sept. 20/69	60	2.5
	P-2381-37	Radcliffe	July 10/69	62	0.6
	P-6009-7	Raglan	July 19/69	515	0.3
	P-6009-17	Raglan	July 19/69	515	0.3
	P-6036-5	Brougham	Apr. 1/69	508	1.5
Russell	P-1775-28	Clarence	Apr. 1/69	17	6.6
Simcoe	P-1856-44	City of Orillia	July 24/69	11B	0.9
	P-1856-45	City of Orillia	July 24/69	11B	0.5
	P-1920-57	Town of Midland	July 24/69	12	0.6
	P-1973-33	Tecumseth	Sept. 20/69	27	0.9
	P-2079-59	City of Barrie	Apr. 1/69	26 and 27	0.8
	P-2079-60	Vespra	June 21/69	27	0.1
	P-2082-34	Medonte	June 21/69	12TC	0.1
	P-2203-24	City of Orillia	July 24/69	12B	0.2
	P-2847-151	City of Barrie	May 24/69	400	0.2
Thunder Bay	P-2162-49	84 (Mun. of Schreiber)	Nov. 15/69	17TC	0.4
Timiskaming	P-3365-25	Bucke	May 17/69	558	0.0
Waterloo	P-1688-21	Waterloo	May 24/69	24	0.5
Wellington	P-1643-73	City of Guelph	July 10/69	6	3.6
	P-1903-24	City of Guelph	July 10/69	7	1.4
	P-1942-48	Town of Fergus	Nov. 1/69	6	0.3
	P-1942-50	Town of Fergus	Nov. 1/69	6	0.4
	P-2047-14	City of Guelph	June 21/69	24	0.6
	P-2047-15	City of Guelph	July 10/69	24	0.7
	P-2077-58	Village of Arthur	Nov. 1/69	6	0.5
Wentworth	P-1782-85	Town of Stoney Creek	July 12/69	8	0.9
York	P-1967-47	King	May 22/69	27	0.5

20N

A56

ANNUAL REPORT

for the fiscal year ending
March 31st

1971

Department of Highways

ONTARIO

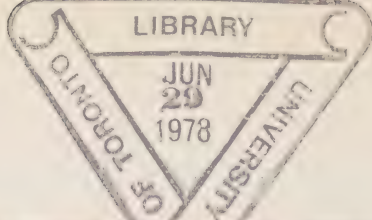
ANNUAL REPORT

for the fiscal year ending
March 31st,

1971

Department of Highways

ONTARIO



*Hon. Charles MacNaughton
Minister of Highways, Ontario*



THE MINISTER OF HIGHWAYS

TO THE HONOURABLE WILLIAM ROSS MACDONALD, P.C., C.D., Q.C., LL.D.
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before you the
Annual Report of the Department of Highways, Ontario, for
the fiscal year ending March 31, 1971.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Edwards" or similar, written over the printed name.

Minister of Highways

Parliament Buildings,
Toronto, Ontario,
December 31, 1971.



A. T. C. McNab
Deputy Minister, Department of Highways, Ontario



ONTARIO
OFFICE OF
DEPUTY MINISTER OF HIGHWAYS

TO THE HONOURABLE CHARLES MACNAUGHTON,
Minister of Highways, Ontario.

Sir:

I have the honour to present the report of the
activities of the Department of Highways for
the fiscal year ending March 31, 1971.

Respectfully submitted,


Deputy Minister

Downsview, Ontario,
December 31, 1971.

Table of Contents

ORGANIZATION	vii
DHO ORGANIZATION CHART	vii
FOREWORD	1
DEPUTY MINISTER'S SUMMARY	3
ENGINEERING DIVISION	4
Planning	5
Design	14
Research and Transportation Systems	20
Operations	26
ADMINISTRATIVE DIVISION	48
Financial	48
Services	58
Electronic Computing	63
PERSONNEL	68
SPECIAL REPORTS	71
INFORMATION SERVICES	74
HIGHWAY CONSTRUCTION 1970-71	77
APPENDICES	107

ORGANIZATION

The Ontario Department of Highways, with Headquarters at Downsview, administers five Regions embracing 18 Districts throughout the Province. Regional personnel are largely concerned with concepts and planning; and those in Districts with actual construction and maintenance of highways.

Like other Departments of the Ontario Government, DHO is headed by a Minister of the Crown, who is an elected member of the Provincial Parliament. The Minister is advised on engineering and general policy matters by his Deputy Minister, a senior civil servant with the overall responsibility for the day-to-day operations of the Department.

The Deputy Minister is aided by two Assistant Deputy Ministers, one responsible for the Engineering Division and the other for the Administration Division. These Divisions include all but two of the Department's functions—Personnel and Legal, which are under the direct jurisdiction of the Deputy Minister.

Because of their many and diverse activities, Divisions are organized into Branches; these, in turn, into Offices; and Offices into Sections.

The following Offices report directly to the Assistant Deputy Minister (Engineering): Claims (Contract), Estimating, Program, Resources and Access Roads. The Engineering Audit Office and Information Services report directly to the Assistant Deputy Minister (Administration).



DEPARTMENT OF HIGHWAYS, ONTARIO

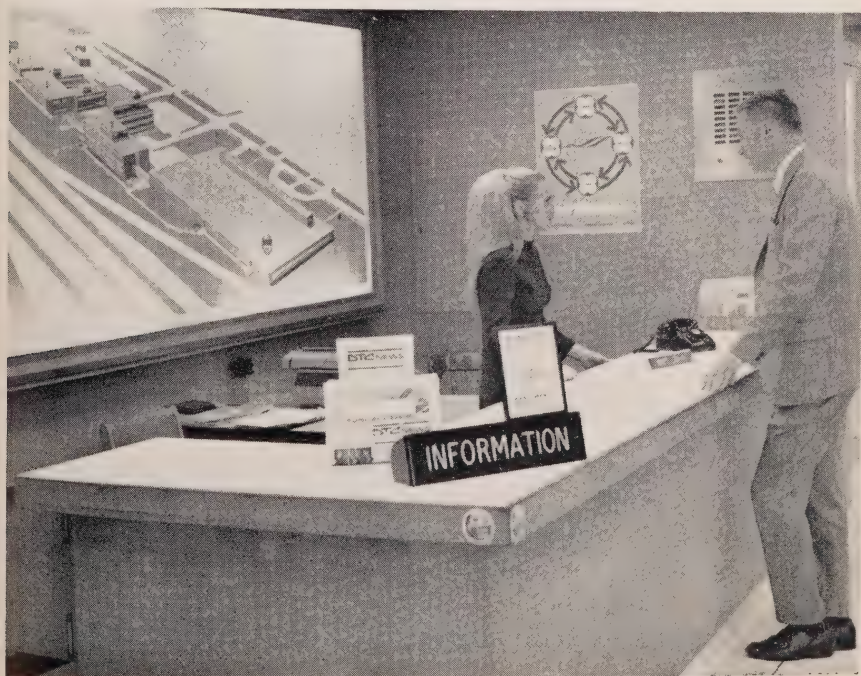
ORGANIZATION CHART

1. 1950-1951 2. 1951-1952 3. 1952-1953 4. 1953-1954 5. 1954-1955 6. 1955-1956 7. 1956-1957 8. 1957-1958 9. 1958-1959 10. 1959-1960 11. 1960-1961 12. 1961-1962 13. 1962-1963 14. 1963-1964 15. 1964-1965 16. 1965-1966 17. 1966-1967 18. 1967-1968 19. 1968-1969 20. 1969-1970 21. 1970-1971 22. 1971-1972 23. 1972-1973 24. 1973-1974 25. 1974-1975 26. 1975-1976 27. 1976-1977 28. 1977-1978 29. 1978-1979 30. 1979-1980 31. 1980-1981 32. 1981-1982 33. 1982-1983 34. 1983-1984 35. 1984-1985 36. 1985-1986 37. 1986-1987 38. 1987-1988 39. 1988-1989 40. 1989-1990 41. 1990-1991 42. 1991-1992 43. 1992-1993 44. 1993-1994 45. 1994-1995 46. 1995-1996 47. 1996-1997 48. 1997-1998 49. 1998-1999 50. 1999-2000 51. 2000-2001 52. 2001-2002 53. 2002-2003 54. 2003-2004 55. 2004-2005 56. 2005-2006 57. 2006-2007 58. 2007-2008 59. 2008-2009 60. 2009-2010 61. 2010-2011 62. 2011-2012 63. 2012-2013 64. 2013-2014 65. 2014-2015 66. 2015-2016 67. 2016-2017 68. 2017-2018 69. 2018-2019 70. 2019-2020 71. 2020-2021 72. 2021-2022 73. 2022-2023 74. 2023-2024 75. 2024-2025 76. 2025-2026 77. 2026-2027 78. 2027-2028 79. 2028-2029 80. 2029-2030 81. 2030-2031 82. 2031-2032 83. 2032-2033 84. 2033-2034 85. 2034-2035 86. 2035-2036 87. 2036-2037 88. 2037-2038 89. 2038-2039 90. 2039-2040 91. 2040-2041 92. 2041-2042 93. 2042-2043 94. 2043-2044 95. 2044-2045 96. 2045-2046 97. 2046-2047 98. 2047-2048 99. 2048-2049 100. 2049-2050 101. 2050-2051 102. 2051-2052 103. 2052-2053 104. 2053-2054 105. 2054-2055 106. 2055-2056 107. 2056-2057 108. 2057-2058 109. 2058-2059 110. 2059-2060 111. 2060-2061 112. 2061-2062 113. 2062-2063 114. 2063-2064 115. 2064-2065 116. 2065-2066 117. 2066-2067 118. 2067-2068 119. 2068-2069 120. 2069-2070 121. 2070-2071 122. 2071-2072 123. 2072-2073 124. 2073-2074 125. 2074-2075 126. 2075-2076 127. 2076-2077 128. 2077-2078 129. 2078-2079 130. 2079-2080 131. 2080-2081 132. 2081-2082 133. 2082-2083 134. 2083-2084 135. 2084-2085 136. 2085-2086 137. 2086-2087 138. 2087-2088 139. 2088-2089 140. 2089-2090 141. 2090-2091 142. 2091-2092 143. 2092-2093 144. 2093-2094 145. 2094-2095 146. 2095-2096 147. 2096-2097 148. 2097-2098 149. 2098-2099 150. 2099-2100 151. 2100-2101 152. 2101-2102 153. 2102-2103 154. 2103-2104 155. 2104-2105 156. 2105-2106 157. 2106-2107 158. 2107-2108 159. 2108-2109 160. 2109-2110 161. 2110-2111 162. 2111-2112 163. 2112-2113 164. 2113-2114 165. 2114-2115 166. 2115-2116 167. 2116-2117 168. 2117-2118 169. 2118-2119 170. 2119-2120 171. 2120-2121 172. 2121-2122 173. 2122-2123 174. 2123-2124 175. 2124-2125 176. 2125-2126 177. 2126-2127 178. 2127-2128 179. 2128-2129 180. 2129-2130 181. 2130-2131 182. 2131-2132 183. 2132-2133 184. 2133-2134 185. 2134-2135 186. 2135-2136 187. 2136-2137 188. 2137-2138 189. 2138-2139 190. 2139-2140 191. 2140-2141 192. 2141-2142 193. 2142-2143 194. 2143-2144 195. 2144-2145 196. 2145-2146 197. 2146-2147 198. 2147-2148 199. 2148-2149 200. 2149-2150 201. 2150-2151 202. 2151-2152 203. 2152-2153 204. 2153-2154 205. 2154-2155 206. 2155-2156 207. 2156-2157 208. 2157-2158 209. 2158-2159 210. 2159-2160 211. 2160-2161 212. 2161-2162 213. 2162-2163 214. 2163-2164 215. 2164-2165 216. 2165-2166 217. 2166-2167 218. 2167-2168 219. 2168-2169 220. 2169-2170 221. 2170-2171 222. 2171-2172 223. 2172-2173 224. 2173-2174 225. 2174-2175 226. 2175-2176 227. 2176-2177 228. 2177-2178 229. 2178-2179 230. 2179-2180 231. 2180-2181 232. 2181-2182 233. 2182-2183 234. 2183-2184 235. 2184-2185 236. 2185-2186 237. 2186-2187 238. 2187-2188 239. 2188-2189 240. 2189-2190 241. 2190-2191 242. 2191-2192 243. 2192-2193 244. 2193-2194 245. 2194-2195 246. 2195-2196 247. 2196-2197 248. 2197-2198 249. 2198-2199 250. 2199-2200 251. 2200-2201 252. 2201-2202 253. 2202-2203 254. 2203-2204 255. 2204-2205 256. 2205-2206 257. 2206-2207 258. 2207-2208 259. 2208-2209 260. 2209-2210 261. 2210-2211 262. 2211-2212 263. 2212-2213 264. 2213-2214 265. 2214-2215 266. 2215-2216 267. 2216-2217 268. 2217-2218 269. 2218-2219 270. 2219-2220 271. 2220-2221 272. 2221-2222 273. 2222-2223 274. 2223-2224 275. 2224-2225 276. 2225-2226 277. 2226-2227 278. 2227-2228 279. 2228-2229 280. 2229-2230 281. 2230-2231 282. 2231-2232 283. 2232-2233 284. 2233-2234 285. 2234-2235 286. 2235-2236 287. 2236-2237 288. 2237-2238 289. 2238-2239 290. 2239-2240 291. 2240-2241 292. 2241-2242 293. 2242-2243 294. 2243-2244 295. 2244-2245 296. 2245-2246 297. 2246-2247 298. 2247-2248 299. 2248-2249 300. 2249-2250 301. 2250-2251 302. 2251-2252 303. 2252-2253 304. 2253-2254 305. 2254-2255 306. 2255-2256 307. 2256-2257 308. 2257-2258 309. 2258-2259 310. 2259-2260 311. 2260-2261 312. 2261-2262 313. 2262-2263 314. 2263-2264 315. 2264-2265 316. 2265-2266 317. 2266-2267 318. 2267-2268 319. 2268-2269 320. 2269-2270 321. 2270-2271 322. 2271-2272 323. 2272-2273 324. 2273-2274 325. 2274-2275 326. 2275-2276 327. 2276-2277 328. 2277-2278 329. 2278-2279 330. 2279-2280 331. 2280-2281 332. 2281-2282 333. 2282-2283 334. 2283-2284 335. 2284-2285 336. 2285-2286 337. 2286-2287 338. 2287-2288 339. 2288-2289 340. 2289-2290 341. 2290-2291 342. 2291-2292 343. 2292-2293 344. 2293-2294 345. 2294-2295 346. 2295-2296 347. 2296-2297 348. 2297-2298 349. 2298-2299 350. 2299-2300 351. 2300-2301 352. 2301-2302 353. 2302-2303 354. 2303-2304 355. 2304-2305 356. 2305-2306 357. 2306-2307 358. 2307-2308 359. 2308-2309 360. 2309-2310 361. 2310-2311 362. 2311-2312 363. 2312-2313 364. 2313-2314 365. 2314-2315 366. 2315-2316 367. 2316-2317 368. 2317-2318 369. 2318-2319 370. 2319-2320 371. 2320-2321 372. 2321-2322 373. 2322-2323 374. 2323-2324 375. 2324-2325 376. 2325-2326 377. 2326-2327 378. 2327-2328 379. 2328-2329 380. 2329-2330 381. 2330-2331 382. 2331-2332 383. 2332-2333 384. 2333-2334 385. 2334-2335 386. 2335-2336 387. 2336-2337 388. 2337-2338 389. 2338-2339 390. 2339-2340 391. 2340-2341 392. 2341-2342 393. 2342-2343 394. 2343-2344 395. 2344-2345 396. 2345-2346 397. 2346-2347 398. 2347-2348 399. 2348-2349 400. 2349-2350 401. 2350-2351 402. 2351-2352 403. 2352-2353 404. 2353-2354 405. 2354-2355 406. 2355-2356 407. 2356-2357 408. 2357-2358 409. 2358-2359 410. 2359-2360 411. 2360-2361 412. 2361-2362 413. 2362-2363 414. 2363-2364 415. 2364-2365 416. 2365-2366 417. 2366-2367 418. 2367-2368 419. 2368-2369 420. 2369-2370 421. 2370-2371 422. 2371-2372 423. 2372-2373 424. 2373-2374 425. 2374-2375 426. 2375-2376 427. 2376-2377 428. 2377-2378 429. 2378-2379 430. 2379-2380 431. 2380-2381 432. 2381-2382 433. 2382-2383 434. 2383-2384 435. 2384-2385 436. 2385-2386 437. 2386-2387 438. 2387-2388 439. 2388-2389 440. 2389-2390 441. 2390-2391 442. 2391-2392 443. 2392-2393 444. 2393-2394 445. 2394-2395 446. 2395-2396 447. 2396-2397 448. 2397-2398 449. 2398-2399 450. 2399-2400 451. 2400-2401 452. 2401-2402 453. 2402-2403 454. 2403-2404 455. 2404-2405 456. 2405-2406 457. 2406-2407 458. 2407-2408 459. 2408-2409 460. 2409-2410 461. 2410-2411 462. 2411-2412 463. 2412-2413 464. 2413-2414 465. 2414-2415 466. 2415-2416 467. 2416-2417 468. 2417-2418 469. 2418-2419 470. 2419-2420 471. 2420-2421 472. 2421-2422 473. 2422-2423 474. 2423-2424 475. 2424-2425 476. 2425-2426 477. 2426-2427 478. 2427-2428 479. 2428-2429 480. 2429-2430 481. 2430-2431 482. 2431-2432 483. 2432-2433 484. 2433-2434 485. 2434-2435 486. 2435-2436 487. 2436-2437 488. 2437-2438 489. 2438-2439 490. 2439-2440 491. 2440-2441 492. 2441-2442 493. 2442-2443 494. 2443-2444 495. 2444-2445 496. 2445-2446 497. 2446-2447 498. 2447-2448 499. 2448-2449 500. 2449-2450 501. 2450-2451 502. 2451-2452 503. 2452-2453 504. 2453-2454 505. 2454-2455 506. 2455-2456 507. 2456-2457 508. 2457-2458 509. 2458-2459 510. 2459-2460 511. 2460-2461 512. 2461-2462 513. 2462-2463 514. 2463-2464 515. 2464-2465 516. 2465-2466 517. 2466-2467 518. 2467-2468 519. 2468-2469 520. 2469-2470 521. 2470-2471 522. 2471-2472 523. 2472-2473 524. 2473-2474 525. 2474-2475 526. 2475-2476 527. 2476-2477 528. 2477-2478 529. 2478-2479 530. 2479-2480 531. 2480-2481 532. 2481-2482 533. 2482-2483 534. 2483-2484 535. 2484-2485 536. 2485-2486 537. 2486-2487 538. 2487-2488 539. 2488-2489 540. 2489-2490 541. 2490-2491 542. 2491-2492 543. 2492-2493 544. 2493-2494 545. 2494-2495 546. 2495-2496 547. 2496-2497 548. 2497-2498 549. 2498-2499 550. 2499-2500 551. 2500-2501 552. 2501-2502 553. 2502-2503 554. 2503-2504 555. 2504-2505 556. 2505-2506 557. 2506-2507 558. 2507-2508 559. 2508-2509 560. 2509-2510 561. 2510-2511 562. 2511-2512 563. 2512-2513 564. 2513-2514 565. 2514-2515 566. 2515-2516 567. 2516-2517 568. 2517-2518 569. 2518-2519 570. 2519-2520 571. 2520-2521 572. 2521-2522 573. 2522-2523 574. 2523-2524 575. 2524-2525 576. 2525-2526 577. 2526-2527 578. 2527-2528 579. 2528-2529 580. 2529-2530 581. 2530-2531 582. 2531-2532 583. 2532-2533 584. 2533-2534 585. 2534-2535 586. 2535-2536 587. 2536-2537 588. 2537-2538 589. 2538-2539 590. 2539-2540 591. 2540-2541 592. 2541-2542 593. 2542-2543 594. 2543-2544 595. 2544-2545 596. 2545-2546 597. 2546-2547 598. 2547-2548 599. 2548-2549 600. 2549-2550 601. 2550-2551 602. 2551-2552 603. 2552-2553 604. 2553-2554 605. 2554-2555 606. 2555-2556 607. 2556-2557 608. 2557-2558 609. 2558-2559 610. 2559-2560 611. 2560-2561 612. 2561-2562 613. 2562-2563 614. 2563-2564 615. 2564-2565 616. 2565-2566 617. 2566-2567 618. 2567-2568 619. 2568-2569 620. 2569-2570 621. 2570-2571 622. 2571-2572 623. 2572-2573 624. 2573-2574 625. 2574-2575 626. 2575-2576 627. 2576-2577 628. 2577-2578 629. 2578-2579 630. 2579-2580 631. 2580-2581 632. 2581-2582 633. 2582-2583 634. 2583-2584 635. 2584-2585 636. 2585-2586 637. 2586-2587 638. 2587-2588 639. 2588-2589 640. 2589-2590 641. 2590-2591 642. 2591-2592 643. 2592-2593 644. 2593-2594 645. 2594-2595 646. 2595-2596 647. 2596-2597 648. 2597-2598 649. 2598-2599 650. 2599-2600 651. 2600-2601 652. 2601-2602 653. 2602-2603 654. 2603-2604 655. 2604-2605 656. 2605-2606 657. 2606-2607 658. 2607-2608 659. 2608-2609 660. 2609-2610 661. 2610-2611 662. 2611-2612 663. 2612-2613 664. 2613-2614 665. 2614-2615 666. 2615-2616 667. 2616-2617 668. 2617-2618 669. 2618-2619 670. 2619-2620 671. 2620-2621 672. 2621-2622 673. 2622-2623 674. 2623-2624 675. 2624-2625 676. 2625-2626 677. 2626-2627 678. 2627-2628 679. 2628-2629 680. 2629-2630 681. 2630-2631 682. 2631-2632 683. 2632-2633 684. 2633-2634 685. 2634-2635 686. 2635-2636 687. 2636-2637 688. 2637-2638 689. 2638-2639 690. 2639-2640 691. 2640-2641 692. 2641-2642 693. 2642-2643 694. 2643-2644 695. 2644-2645 696. 2645-2646 697. 2646-2647 698. 2647-2648 699. 2648-2649 700. 2649-2650 701. 2650-2651 702. 2651-2652 703. 2652-2653 704. 2653-2654 705. 2654-2655 706. 2655-2656 707. 2656-2657 708. 2657-2658 709. 2658-2659 710. 2659-2660 711. 2660-2661 712. 2661-2662 713. 2662-2663 714. 2663-2664 715. 2664-2665 716. 2665-2666 717. 2666-2667 718. 2667-2668 719. 2668-2669 720. 2669-2670 721. 2670-2671 722. 2671-2672 723. 2672-2673 724. 2673-2674 725. 2674-2675 726. 2675-2676 727. 2676-2677 728. 2677-2678 729. 2678-2679 730. 2679-2680 731. 2680-2681 732. 2681-2682 733. 2682-2683 734. 2683-2684 735. 2684-2685 736. 2685-2686 737. 2686-2687 738. 2687-2688 739. 2688-2689 740. 2689-2690 741. 2690-2691 742. 2691-2692 743. 2692-2693 744. 2693-2694 745. 2694-2695 746. 2695-2696 747. 2696-2697 748. 2697-2698 749. 2698-2699 750. 2699-2700 751. 2700-2701 752. 2701-2702 753. 2702-2703 754. 2703-2704 755. 2704-2705 756. 2705-2706 757. 2706-2707 758. 2707-2708 759. 2708-2709 760. 2709-2710 761. 2710-2711 762. 2711-2712 763. 2712-2713 764. 2713-2714 765. 2714-2715 766. 2715-2716 767. 2716-2717 768. 2717-2718 769. 2718-2719 770. 2719-2720 771. 2720-2721 772. 2721-2722 773. 2722-2723 774. 2723-2724 775. 2724-2725 776. 2725-2726 777. 2726-2727 778. 2727-2728 779. 2728-2729 780. 2729-2730 781. 2730-2731 782. 2731-2732 783. 2732-2733 784. 2733-2734 785. 2734-2735 786. 2735-2736 787. 2736-2737 788. 2737-2738 789. 2738-2739 790. 2739-2740 791. 2740-2741 792. 2741-2742 793. 2742-2743 794. 2743-2744 795. 2744-2745 796. 2745-2746 797. 2746-2747 798. 2747-2748 799. 2748-2749 800. 2749-2750 801. 2750-2751 802. 2751-2752 803. 2752-2753 804. 2753-2754 805. 2754-2755 806. 2755-2756 807. 2756-2757 808. 2757-2758 809. 2758-2759 810. 2759-2760 811. 2760-2761 812. 2761-2762 813. 2762-2763 814. 2763-2764 815. 2764-2765 816. 2765-2766 817. 2766-2767 818. 2767-2768 819. 2768-2769 820. 2769-2770 821. 2770-2771 822. 2771-2

DEPARTMENT OF HIGHWAYS, ONTARIO

This report on activities for the fiscal year 1970-71 is the final Annual Report of the Ontario Department of Highways as a separate entity. The years that have passed since the Department was established in 1915 have seen the transformation of Ontario from a largely agricultural region into one of the most highly industrialized areas of the world. The overall contribution of DHO to this development is incalculable, but evidence in the form of one of the world's best highway systems is here for all to see, and use.

Transportation today, however, is not confined to highways. It has acquired an all-encompassing role. What is done in the field now affects regional development, municipal growth, recreational areas—affects every facet of life in Ontario. It was recognition of this fact that led at the end of the fiscal year to the announcement of the formation of the Department of Transportation and Communications, which combines the functions of the Departments of Highways and Transport and the Ontario Northland Transportation Commission. The amalgamation was a natural outgrowth of research and development programs carried out over the past several years, particularly in the area of high-density population, in which GO Transit was a pioneering venture.



The many thousands visiting the Department's Downsview complex annually from throughout Canada and abroad check in first at the Information Desk and Escort Service Centre.

The main challenge of the future in the field of transportation is the necessity to adopt a total transportation concept serving environmental, social and economic needs. This applies particularly to urban centres, where it has become obvious that a balanced transportation system must be developed as an alternative to traffic congestion. Recent experience indicates that highway expansion alone will not necessarily solve the problem.

New modes of transportation are in the offing for Ontario; have, in fact, been under study for several years. There is no inclination to gamble on them, however. Their practical application to the Province's needs in terms of climate and environment must first be demonstrated.

"Futuristic" was the word only a few years ago for modes of transportation incorporating such technological features as air cushion support or linear induction motors, but now these and other advanced systems are in various stages of testing and development in several countries.

New modes of transportation doubtless will come, but plans for the future also stress the continuing need for highways. Basic ground transportation will continue to play a major role in our development, particularly in the process of bringing slow-growth areas into the mainstream of the Province's economic life; and there will still be need for local roads in expanding metropolitan and other urban centres.

With its launching at the end of the year as an integral part of a sophisticated transportation and communications system that includes movement of people and goods by air and water, as well as by land, Ontario's highway network will continue to be as vital a factor in the life and development of the Province as it was under the banner of DHO.

DEPUTY MINISTER'S SUMMARY

This report for the fiscal year 1970-71 marks the end of an era and at the same time summarizes the activities of one of the busiest years in DHO history. Changing demands shape the course of the future. And this Department, for many years in the forefront of highway technology and development, now moves more deeply into the field of total transportation planning.

Growing transportation demands during the late 1960's, particularly in high density population areas, pointed up the need for a more integrated approach to the overall problem. Evidence that the need for increased aid to municipalities was recognized by this Department is the increasing subsidies paid by DHO over the past several years to assist in road and street programs.

Of the Department's gross capital expenditure of \$497,291,104 for the fiscal year 1970-71, subsidies to municipalities amounted to \$194,611,336, an increase of more than \$19-million over the preceding year. Total subsidies paid to municipalities over the past four years was close to the \$695-million mark.

With our commitments to the total transportation concept, the subsidies portion of the gross capital expenditure can be expected to increase in the years ahead. Following is a summary of expenditures as reported by the Financial Comptroller for fiscal 1970-71, with comparative figures for the preceding year:

	Fiscal Year Ending	
	March 31, 1971	March 31, 1970
Gross capital payments on construction of King's Highways and Secondary Highways	\$215,118,894	\$199,915,087
Less: Recoveries on		
(1) Trans-Canada Highway		
(2) City of Ottawa		
(3) Railway Bridges	6,564,553	5,558,602
Net capital payments on construction of King's Highways and Secondary Highways	\$208,554,341	\$194,356,485
Ordinary expenditures on King's Highways and Secondary Highways including maintenance and general operating expenses	94,125,427	84,728,102
Provincial subsidies on municipal roads and streets, development roads, roads in unincorporated townships and connecting links	194,611,336	175,562,921
Total net expenditure	\$497,291,104	\$454,647,508

ENGINEERING DIVISION

The Assistant Deputy Minister (Engineering) is responsible for all of the engineering and other technical functions performed by the four Branches of the Division—Planning, Design, Research, and Operations.



This picture turned out to be a prize winner as camera caught a workman silhouetted against the sky atop framework during bridge deck construction at the Highway 27 and QEW Interchange.

Planning Branch

Like highway planners in many parts of the world, those attached to DHO were increasingly involved in the development of the total transportation system and in planning highways that will take into account the social, economic and environmental factors involved in their construction.

TRAFFIC AND TRANSPORTATION PLANNING OFFICE

In the fall of 1970 the Project Transportation Planning Section initiated a Truck Study with the objective of developing a method of analyzing, simulating, and forecasting intraregional truck trip patterns over the provincial highway network for both regional road planning and functional design purposes.

The Section prepared a revised O/D interview form for trucks to acquire from our roadside surveys the additional trip purpose, O and D establishment type, load and trip frequency data deemed necessary for establishing relationships between land use variables (population, employment, truck registrations) of interacting city pairs, and the number of trips generated between them according to specific trip purpose or vehicle type. The form was later used at a test site on the QEW east of Hamilton, where loaded and empty trucks required to pass through the DOT scales were recorded.

Data from this survey is being analyzed and it is hoped that the results will be sufficiently meaningful in explaining major inter-city truck movements that this method will be adopted universally for the regional transportation study program.

The Project Transportation Planning Section is also endeavouring to develop a modelling system that would facilitate the analysis, simulation, and forecasting of demands for intraregional commodity flows by all modes in the provincial transportation system.

Special Projects

Geocoding

Geocoding consists in specifying locations by numerical code so that the position of each point of interest is recorded in a computer.

A pilot study was carried out covering some 60 square miles in Mississauga. In the photogrammetry process, stereoplotters aided by aerial photos and additional non-feature data, identified and digitized all road nodes and property centroids. The resulting tapes were fed into an automatic drafting machine which plotted the maps.

The experience gained from the Mississauga pilot study is being applied to the Niagara Regional study. This project was undertaken with a two-fold purpose: first, to provide a source of information in the form of a data bank; and secondly, to create a more efficient data storage and retrieval system. The location of all intersection points between transportation systems (roads, railways, hydro right-of-ways, rivers, canals, etc.) are identified. All information obtained about the transportation system, D.B.S. enumeration areas, traffic zones, Department of Municipal Affairs, township and urban files, and others will be related to the geocoded system.

To achieve this kind of system, the Geocoding Group has been working closely with photogrammetry and E.C.B. groups.

It is expected that with completion of the Niagara Regional Study, the Group will have had the opportunity to study the system, evaluate the concept and determine its value for the future.

Land Use

Activities of the Land Use Group during the year were concentrated on development of a land use model that would allow a more objective estimate of activities (e.g. population) for small urban areas. Another objective was to develop a technique for performing impact analyses of transportation system improvements on a more systematic basis. A pilot study was carried out for the City of Hamilton and is now being expanded to cover a larger area surrounding Hamilton, including the Townships of Flamborough and Saltfleet and the Towns of Burlington and Dundas.

Near the end of the year, the Land Use Group began providing land-use information for transportation improvements, as part of a new team approach to the examination of suggested changes to the transportation system. The work has concentrated on the provision of present and future land use data for the study areas. The impact of the new facility on present and future land use has been evaluated, and adjustments made to the land-use projections to incorporate the impact.

Small Urban Area Studies

Small urban area studies are an expansion of regional studies. Although regional studies establish the provincial highway system through a 20-year planning period, their recommendations usually stop at the boundary of the urban area, large or small.

The small urban area studies group carries out pre-studies of small municipalities to determine if traffic problems exist. The pre-study involves mainly traffic analysis of the highway through the urban area. Summer traffic data was requested for 25 municipalities selected. According to the classification of the highway and the severity of the traffic problems, a priority list for the small towns will be established.

The locations designated as first priority will be studied by a team made up of members from the environmental group, project planning, transportation planning, road design, and municipalities, and other experts in allied fields.

Mass Transit Services

Activities of the Mass Transit Services Group involved two main functions. The first was the refinement and analysis of data obtained from a home interview survey carried out in the fall of 1969. This work is part of a project to develop a mathematical model to simulate the choice of travel mode for inter-city trips. The second function involved analytical work undertaken in a service capacity to the GO Transit Office. This included the design and analysis of an on-train survey to investigate the choice of access mode at Pickering GO station. The access study formed part of an overall evaluation by GO Transit of the experimental mini-bus service introduced in Bay Ridges in July, 1970. The Mass Transit Services Group also carried out an estimate of the potential patronage of proposed express bus routes in the corridor northwest of Toronto. These estimates provided part of the total input to the planning of the proposed service by GO Transit.

TRAFFIC CONTROL SECTION

This Section's role became more effective during the year, both at Head Office and in the Regions, due to major changes in work schedules. The problem up to now has always been that full coverage of the main sections of the highway system has been impossible because of demands made on personnel and equipment to meet individual requests for investigations of traffic problems at specific locations.

All Regional Offices are now committed to programmed traffic study schedules covering all sections of highway under their jurisdiction. It should be possible, when the first study cycle has been completed, to have detailed traffic information available on request by simply retrieving up-to-date data from our files.

Studies undertaken by Traffic Control Development are also coming to fruition and some have been completed, and recommendations made. In the Regions approximately 2,000 traffic studies of various types were completed during the year as a result of requests from Municipal authorities, the general public, or to obtain data for other Sections within the Department. This work was in addition to, or integrated with the programmed traffic study schedules.

Regional Traffic staff has now been made available to assist Municipalities by the conduct of traffic studies on municipal roads. There has been considerable demand for this service.

A new program has been launched to provide subsidy for the conduct of traffic operations studies in municipalities. These studies will be short-term action oriented assessments of traffic flow and safety, with emphasis on obtaining maximum efficiency from the existing road network.

CHARACTERISTICS SECTION

During the year under review the Transportation Characteristics Section of the Transportation Planning Office, a new title as of November 1, 1970, completed 1,150 requests for traffic data, a decrease of nearly 12 per cent from the previous year. Considerable amounts of traffic data were made available from the volume files to consulting engineers, planners, university research groups and students.

Permanent Count Stations were reduced from 42 to 20, but two new stations, Snelgrove on Highway 10 and Kirby on Highway 35 and 115, were added for research purposes. There was no reduction in the stations operated by DHO for the Ontario Department of Transport, but the Burch Street, Sault Ste. Marie station will probably be discontinued because of poor results.

The computer program to store PCS information on magnetic tape and provide monthly reports was continued, but some difficulties were experienced. The whole program is being investigated to up-date many of its procedures and to make it more compatible to the 360-65.

Routine inventory traffic counts were taken by Regional Traffic field personnel and special non-weekend counts were taken at specially selected locations. Scheduled counting at service ramps and adjoining highway sections was also included if they were located in the area being counted this year.

The Accident Records Group received and coded 39,137 accident reports and completed 620 requests for accident experience information, a decrease of more than 15 per cent from the previous year. The decrease can be attributed to two causes: the accident retrieval program started in May, 1970; and the fact that the South-western and Eastern Regions now have terminal connections with the Electronic Computing Branch at Head Office.

The Origin-Destination Data Processing Group completed 38 studies during the year, nine of which provided 144,780 interviews at 92 stations, of which 132,080 interviews were coded. Three additional surveys were coded: 700 questionnaires on Dial-a-Bus (Bay Ridges); 500 on GO Transit Access; and 122 telephone interviews in Sault Ste. Marie.

The Analysts Group completed 450 volume requests for traffic information, a decrease of more than 12 per cent from last year, but the content was greater; and as in past years, many incidental requests were answered by telephone.

Highway Safety

Approximately 13 billion miles were recorded by motorists travelling the King's Highway system during the year, about 48 per cent of the total mileage driven in the province.



The Montreal River serves as a background to rugged terrain in the Sault Ste. Marie District, where paving of a section of Trans-Canada Highway 17 northerly from the river was completed during the year.

The Department continued to co-operate with all concerned with highway safety.

Assistance was given to the Ontario Provincial Police in their "air patrols" with the measuring and marking of those sections of highways having a high accident rate.

Traffic seminars were again conducted through the province in co-operation with the Ontario Provincial Police, with District and Regional personnel attending. Informal discussions with the OPP resulted in studies being carried out on King's Highways at locations considered accident prone or where certain driving hazards exist.

DHO assisted in conducting School Bus Safety Seminars in many parts of the province for the information of school bus owners, operators and education officials, and lectures were given at Ontario Teacher Preparation Courses in high school driver instruction conducted by the Ontario Motor League and the Ontario Department of Transport. Recommendations contained in inquest reports forwarded to the Department by Ontario's Supervising Coroner in cases where fatal accidents occurred on King's Highways were studied, and reports prepared by District and Regional engineers advised the Supervising Coroner of action taken.

The Department again participated in safety conferences, seminars, courses and meetings conducted by the Canadian Safety Council, Ontario Traffic Conference, Ontario Good Roads Association, Automotive Transport Association, and the Metro Toronto Citizens' Safety Council.

COMPUTER LIAISON SECTION

In serving the interests of the Traffic and Transportation Planning Office during the year in matters related to computer programming and data processing, this Section recorded 3,087 production requests and 58 requests for modifications and development work on the Transportation Planning package. Development work involved the Section in considerable study into specification requirements, particularly in the areas of Geocoding and the creation of Land Use and Highway Inventory data banks.

Technical assistance was provided for the Transportation Characteristics and Traffic Control Sections and for consulting firms working on assignments for the Department. The Section also assisted in organizing lectures and a seminar to keep users informed of latest developments and operating methods.

Computer use during the year based on central processor unit time increased by approximately 33 per cent over the previous year.

Traffic Safety Group

The Traffic Safety Group expanded its activities considerably during the year. The collision data retrieval program was released to users in mid-May, with data for 1967 and 1968 initially available. A collision data summary program, which is proving invaluable for quick reference, gives such information as the totals of night and day collisions by 1/10 of a mile section of highway.

A new collision report form developed in co-operation with the Ontario Department of Transport and the OPP is expected to be of greater value than the old form. The concept of an overall highway safety program was developed with the Electronic Computing Branch and is being implemented. Complete adjustment of the collision data and the inventory files of the Program Office will permit cross-referencing between them for retrieval and analysis of information.

FUNCTIONAL PLANNING OFFICE

Head Office responsibilities in this area of the Department's activities include:

- Reviewing the work of the five Regions in Functional Planning.
- Reviewing and recording subdivision plans affecting the Planning Branch.
- Preparing design procedures and standards for Functional Planning.
- Performing overall administrative duties, such as training, formulation of personnel policies, etc.
- Carrying out special investigations of various projects on highways throughout the province.

Some special investigations by Head Office are included in this list of miscellaneous projects completed during the year:

- Preparation of papers for Regional Functional Planning Engineers' meeting re Economic Approach and Computer Applications.
- Transit design study on freeway corridors.
- Investigation of 10 weigh scale sites and preparation of reports and cost estimates.
- Revising and updating the "Geometric Design Standards for Ontario Highways and Streets."
- Highway 407: proposed interchange complex at Highway 404; design and grades adjusted, cost comparison prepared between fully directional and inner loop type designs for this complex.

The total construction value of work projects issued was \$115,000,000. A summary of the total work processed during the year follows.

General Work Load

Functional reports issued	30
Functional reports reviewed	33
Work projects reviewed	42
Design Criteria reviewed	193
Design Criteria revised	79
Closings, CAH Criteria & Revocations	117
Permit applications reviewed	59
Consultant & Municipal agreements	26
Miscellaneous assignments	52
	<hr/>
	631

Intersection Work Load

Interchanges (designed or reviewed)	107
Channelizations (designed or reviewed)	116
Truck climbing lanes	—
Minor intersections	185
Service centres & entrances	18
Intersection standards prepared	10
Connecting link projects reviewed	1
Miscellaneous assignments	19
	<hr/>
	456
	<hr/>

Right-of-Way Work Load

Subdivision plans plotted	800
Subdivision plans reviewed	300
Exemptions from subdivision control	780
Official plans	80
Amendments to official plans	140
Restricted area and building by-laws	800
Road openings/closings	90
General enquiries	275
	<hr/>
	3,265
	<hr/>

Training Courses

Courses prepared and completed	2
Number of students	12
Additional course participation	1
Number of students	1

Central Region Functional Planning

Reports completed during the year:

District 4

- Highway 58, Merritt Road northerly to Highway 20.
- Highway 56, Binbrook northerly to Elfrida.
- Highway 56, Binbrook southerly to County Road 13.
- Highway 8, Beamsville to St. Catharines.
- Highway 52, Highway 2 to Peters Corners.
- Highway 99, Dundas to Copetown.
- Highway 20, Bismark to Wentworth County Boundary.
- Highway 406, St. Catharines.

District 6

- Highway 401, Express Bus Service and station facilities, Pickering to Oshawa.
- Highways 7 and 12 Intersection improvement at Manchester.
- Highway 401, from Highway 48 to Oshawa west limits.
- Highway 401 and Harmony Road Interchange (Oshawa).
- Highway 401 and Highway 27 Interchange/S.E. quadrant.
- Highway 400, Toronto to Barrie 6-lane interim.

District 7

- Highway 7, from 8.0 miles west of Omemee west limits easterly to 5.1 miles east of Omemee east limits.
- Highway 7, north and south junctions of Highway 28.
- Highway 503, Head River Bridge, 1.6 miles east of Sebright.
- Highway 503, McGee's Creek Bridge.
- Highway 28, Baxter Creek Bridge.

Southwestern Region Functional Planning

Major projects completed during the year, in addition to the printing of the Functional Planning Report, included:

- Highway 402 in Lambton County.
- St. Thomas Expressway from New Sarum to Highway 401.
- Highway 6N, from south limits of Guelph southerly to Highway 401.
- Two projects were in progress during 1970-71 using the services of consultants.

One (Highway 10) was nearing completion at the end of the fiscal year; the other (Highway 27) is now ready for printing.

'The Ultimate Load Capacity of Beam and Slab Bridges', by S. D. Lash and R. Nagaraja. (Final report on Project Q-42, Queen's University, Kingston).

'Concrete Tee-Beams Subjected to Torsion and Combined Bending and Torsion', by S. D. Lash and D. W. Kirk. (Report on Project Q-42, Queen's University, Kingston).

'Thermal Shrinkage Cracking of Some Ontario Pavements', by R. C. G. Haas. (Final report on Project W-14, University of Waterloo).

Northern Region Functional Planning

Major projects carried out during the year included work on 4-lane Highway 11, Gravenhurst northerly, and reconstruction work on the following 2-lane highways:

- Bracebridge Bypass.
- Huntsville Bypass.
- Village of Port Carling.
- Pembroke Bypass.
- Ultimate Development of Highway 103.
- Ultimate Development of Highway 69, Highway 103 to 532.
- Ultimate Development of Highway 69, Highway 532 to 559.
- Two projects on Highway 101.

Due to designation of most arterial routes as controlled access during the previous fiscal year, the number of permits requiring review by the Office continues to increase.

Eastern Region Functional Planning

During the 1970-71 fiscal year Functional Planning, Eastern Region, completed and issued two Functional Planning Reports and 26 major grading work projects by the plan and profile method for a total of 28 projects. This represents an increase of four over the previous year.

Following is a summary of the year's work:

- Grading work projects were issued for the final 22 miles of proposed Highway 417 east of Ottawa, from Dunvegan easterly to existing Highway 17. Completion of the Functional Planning Report is expected in the 1971-72 fiscal year.
- Functional Planning Reports were issued on Highway 138 from Highway 401 to Highway 417 and Secondary Highway 515 from Jewellville easterly to the Raglan-Lyndock township boundary.
- A large portion of the Functional Report for Highway 416 was completed and it is likely that issue will occur by late summer of 1971.
- Although no projects were issued on proposed Highway 417 west of Ottawa, from former County Road 9 to the Highway 7 connection, and on proposed Highway 17N, from the Highway 7 connection to Haley Station, a considerable amount of work was completed with survey requests and property requests being issued by the scheduled dates. It is anticipated that the grading work projects will be issued by fall, 1971, and that much of the Functional Report work will be completed by the end of the 1971-72 fiscal year.



Expressways change the face of cities and at the same time make travel into and out of urban centres easier and safer. During the year this section of the Kitchener-Waterloo Expressway was completed from Frederick Street to King Street, an area containing two underpasses, one overpass and four interchanges to accommodate access and cross traffic.

- The Functional Report work on proposed Highway 17N from Haley Station to the Pembroke Bypass is being done by DeLeuw Cather and completion is scheduled for the middle of the 1971-72 fiscal year.
- Considerable work went into a study of urban Highway 417 within the City of Ottawa prior to the work being allocated to the consulting firm of M. M. Dillon & Co. Ltd. for a feasibility study which would include public participation and evaluation of the environmental and social implications of the urban expressway.
- Due to the concern of residents of Kanata and the Council of the Township of March, revisions to the proposed relocation of former County Road 9 continued to require considerable attention and it is hoped that the next fiscal year will see the completion of this project.
- The Region has participated and taken a leading role in the Technical Advisory Committees for the following urban expressways:
 - Concession Street Expressway, City of Kingston
 - Highway 416 and Highway 417, City of Ottawa
 - New Highway 17, City of Pembroke

- Consultants, during the fiscal year, worked on five Functional Planning Reports, six grading work projects, and one resurfacing work project. In addition, consultants completed ten grading work projects in the Region.
- Among the special planning studies being carried out by the Region were:
 - (a) The development of a study plan for New Highway 15 between Kingston and Ottawa. An appreciable amount of preliminary investigations was carried out as part of the New Highway 15 study.
 - (b) The development of a functional plan for Highway 137 between the Canadian span of the 1,000 Islands Bridge and the Canadian Customs Plaza in conjunction with proposed improvements to the customs plaza by the 1,000 Islands Bridge Authority.
 - (c) A significant amount of work also went into preparation of an "Interim Report" on the Ottawa Queensway in which possible improvements to the facility were studied.

Northwestern Region Functional Planning

In addition to regular pre-engineering projects, the Functional Planning Section took part in several programs aimed at developing the staff in the Section. Among these were the Staff Familiarization Program, a Seminar on New Draughting Techniques, and a Seminar on Tire Studs.

Participation of the Department in a lecture series at Confederation College helped provide students in Northwestern Ontario with an understanding of the Department's planning activities.

After the Technical Advisory Committee for the Thunder Bay Expressway was dissolved, liaison with the City was maintained with the formation of a Joint Technical Committee. This Committee will ensure co-operation between the Department and City on all matters pertaining to the road network. In addition, the Department was asked to provide a permanent observer to sit on the Lakehead Planning Board, and the Regional Functional Planning Superintendent was appointed.

Procedures were also developed with the Department of Lands and Forests to encourage improved co-operation and liaison and legal agreements with developers along the Trans-Canada Highway were initiated for the first time in the Region to provide property protection for future right-of-way requirements.

Design Branch

This Branch designs all highways and structures and supplies all pre-engineering information. It includes the Road Design Office and the Bridge, Engineering Surveys and Photogrammetry Offices.

ROAD DESIGN OFFICE

During the fiscal year the Road Design Office completed design drawings and contract documents and prepared quantity estimates for 213 projects, covering some 1,300 miles of highway construction and reconstruction, which can be summarized as follows:

Resurfacing	310.0 miles
Grading and Drainage	141.0 miles
Grading, Drainage and Granular Base	186.6 miles
Grading, Drainage, Granular Base and Hot Mix Paving	272.0 miles
Grading, Drainage, Granular Base and Concrete Paving	35.0 miles
Granular Base and Paving	59.0 miles
Hot Mix Paving	263.0 miles
Clearing, Grubbing and Fencing	57.0 miles

In addition, designs were completed and contract documents, drawings and estimates prepared for 20 structure and approach contracts and 32 miscellaneous projects for highway illumination, patrol yards and weigh scales.

Central Region

The Central Regional Office, located in Downsview, is responsible for the design of 290.0 miles of highway construction and reconstruction, 60 projects in all in the Toronto, Hamilton and Port Hope Districts.

Design of 10 projects for the widening of Highway 400 from Sheppard Ave. northerly were commenced and completed during the year. In addition, the design of Highway 401, Markham Road Interchange, Highway 401/2A Interchange and Highway 401/27 Interchange, were completed.

Southwestern Region

The design staff completed the design of 34 projects for some 80 miles of major highway construction and 140 miles of highway reconstruction, consisting of clearing, hot mix paving and resurfacing projects. Projects designed in the Southwestern Regional Office are located in Chatham, London, Stratford and Owen Sound Districts. Of special interest is the commencement of the detailed design of the Hanlon Expressway in Guelph, from Waterloo Ave. to Stone Rd. This section will cover 1½ miles at an estimated construction cost of \$1,100,000.

Eastern Region

The Eastern Regional Office, located in Kingston, was responsible for the design of 245 miles of highway construction and 60.5 miles of highway reconstruction, including clearing and resurfacing projects. In total, 53 projects were completed and forwarded to Head Office.

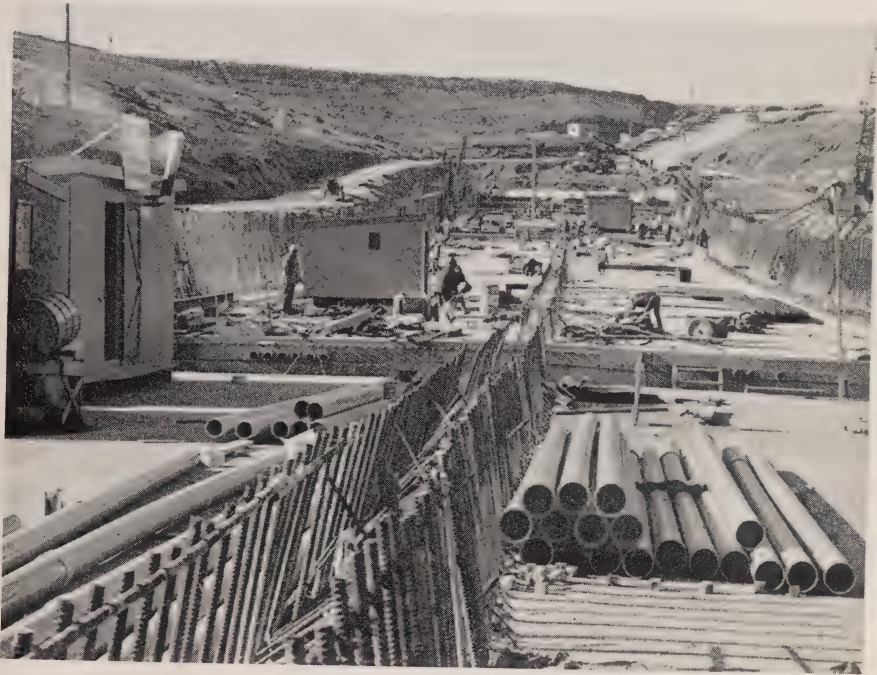
Northern Region

The Northern Regional Office, located in North Bay, is responsible for the design of some 39 projects covering 115 miles of major highway construction, and 265 miles of

highway reconstruction of a more minor nature, such as hot mix paving and re-surfacing projects, in the Huntsville, North Bay and New Liskeard Districts.

Northwestern Region

This Region, with headquarters in Thunder Bay, is responsible for the design of 124 miles of highway construction and reconstruction located in the Districts of Cochrane, Sault Ste. Marie, Thunder Bay and Kenora, a total of 27 projects.



Work continued during the year on construction of the 4-lane East Main Street tunnel in Welland. Scheduled for completion in June, 1972, the tunnel will be a major factor in relieving traffic congestion in the city.

HEAD OFFICE

Road Design Head Office is responsible for the following centralized operations:

DESIGN SERVICES ENGINEER'S SECTION

This Section, under the direction of the Intersection Detail Design Supervisor, is responsible for the detailed design of the horizontal and vertical alignment of channelizations and interchanges. The detailed design of 40 channelizations, 17 interchanges and two interchange improvements have been completed and the intersection design for Consultant's work projects have been reviewed and calculations checked by the group.

The Section also provides geometric analysis services and recommendations to the Special Permits Branch and the Motor Vehicle Licensing Branch, in respect to special permits for movement of loads in excess of 100 feet overall in length.

Geometric Design Group

This group, under the supervision of the Geometric Design Engineer, is responsible for the preparation of geometric layout plans and co-ordinate control system of expressway interchanges. The following have been completed:

- detailed horizontal and vertical design of eight projects, including six interchanges and 11 improvements of existing interchanges.
- produced geometric layout plans and co-ordinate control systems of six projects.
- several revisions of the horizontal and vertical alignment of projects in order to reduce structure or property costs or to improve unsatisfactory existing conditions.

HEAD OFFICE PROJECT DESIGN ENGINEER'S SECTION

Project Review Group

This group is responsible for reviewing all projects submitted from the Regions for accuracy and conformity to current policies. During this fiscal year, this group scrutinized 213 projects, representing more than 1,300 miles of highway construction and reconstruction.

Highway Standards Group

This group, under the direction of the Highway Standards Engineer, is responsible for the preparation of all Department Design Standards for inclusion in projects under design in the Regional Offices.

Design Studies Engineers Group

This group is responsible for the initiation of a systems analysis for the establishing of computer programs dealing with the designing and estimating of highway projects. A variety of programs is available to provide the design staff with the data required to evaluate a multitude of possible solutions and the best from the technical and economic aspects.

New modules of the computerized total engineering system were introduced into the system, extending the scope to incorporate grade setting policies and optimization of pavement reconstruction. Systems analysis were completed for graphical representation of roadside drainage. Lecture material and manuals were prepared and technical courses and seminars given for the users staff.

Procedures Group

Under the direction of the Procedures Officer, this group is responsible for implementation of new or improved practices in design and estimating procedures; the development of revisions to the design and estimating manuals; the updating of the special provisions and illumination manual; and the direction and administration of a continuous training program for Road Design and municipal technical staffs.

BRIDGE OFFICE

This Office is divided into four Sections: Bridge Design, Bridge Control, Municipal Bridges, and Planning.

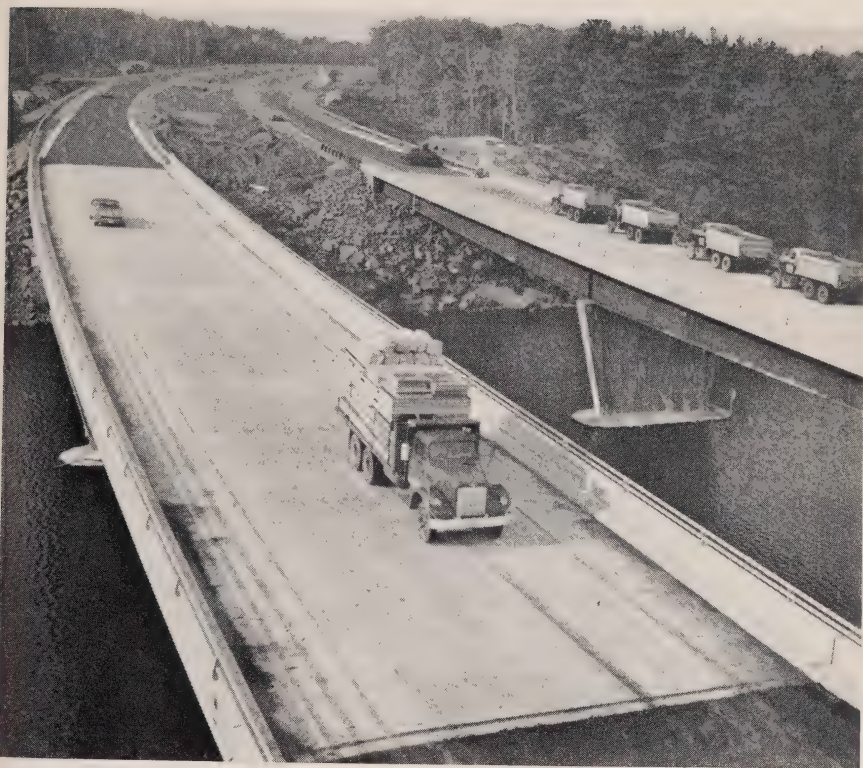
BRIDGE DESIGN SECTION

The structural design for major highway improvements along the Q.E.W. has been completed: the Toronto Entrance, and the Grimsby Diamond Interchange.

There are eight structures and 12 retaining walls in the Toronto Entrance project. The largest structure, the C.N.R. Overhead, is to carry the new Q.E.W. over seven railway tracks at a very sharp skew angle. Total cost of structures for the Toronto Entrance project is estimated at \$4,300,000. There are eight structures in the Q.E.W.-Grimsby Diamond Interchange, with an estimated cost of \$1,600,000 in structures.

Design of structures for the new Highway 404 has started. All the structures are designed with special consideration to accommodate rapid transit in the future.

Five structure widenings along Highway 400 have been designed to meet the requirements of the 400 widening program. All the widening portions are made to match the existing structure to maintain the original appearance.



Work on the Gravenhurst Bypass on Highway 11 proceeded with the completion and opening to traffic of the Gull Lake Narrows Bridge.

The structures for the Highway 401 and Highway 2A Interchange have been completed. Among them, the Rouge River Bridge is most spectacular. Atmospheric corrosion resisting steel box girders were used efficiently. Cost for the crossing alone is estimated at \$1,800,000.

Several designs were completed for structures on the new controlled access Highway 402, which will run from London to Sarnia. Eight of these structures will be two span underpasses, with spans ranging from 100 to 137 feet, and will have decks using atmospheric corrosion resisting steel box girders which will not require painting. This will be the first application of this type of construction for underpasses on a controlled access highway in Ontario.

Two designs were completed for the first phase of the Brantford Expressway, the Grand River Bridge and the Market Street Overpass. Designs for the majority of structures on Highway 417 between Ottawa and the Quebec border were completed, and the design of the Rideau River Bridge on Highway 416 was completed and is now under construction.

Design of St. Joseph Island Bridge on Highway 548 was completed and is now under construction. The new eight-span structure, with a total length of 1,165 feet and a 28-foot roadway, will replace the present ferry service and provide an access to the Island. The main 180-ft. span was designed to be converted into a lift span in the future to provide a 95-ft. vertical navigational clearance.

In all, 128 structures to a value of \$30,642,000 were designed during the year.

MUNICIPAL BRIDGE SECTION

All municipal structures subsidized by the Department are reviewed by this Section to ensure public safety, to reduce costs and to increase the life of structures by means of recommended improvements to design.

During the year, 45 hydrology investigations and 110 river catchment studies were made to resolve such problems as river restrictions, ice jams and alignment. There were 300 site inspections of old bridges for maintenance and planning purposes, and in conjunction with the Legal Branch 72 load restriction by-laws were reviewed. In addition the following submissions received approval:

- 157 Preliminary Plans
- 231 Firm Bridge Plans
- 271 Culvert Plans
- 76 Misc. Building and Other Structures
- 65 Prestressed Concrete Shop Drawings

Bridge Hydrology

The Hydrology Group continued to provide specialized advice on a wide range of hydraulic problems to the Department and other agencies. Municipal work in particular increased considerably towards the end of the year.

1970 was another notable year for major floods. The total damage to King's Highways and municipal roads amounted to more than \$1,100,000. A considerable amount of flood data was collected, and technical advice given to District Offices and municipalities on a variety of problems.

Development of new and improved methods proceeded at a slower rate this year as a result of increased pressure of other work.

BRIDGE CONTROL SECTION

Section engineers continued to assist District field staff on all phases of bridge construction. Technicians provided quality control inspection on all pre-cast prestressed beams manufactured for the Department, as well as for a large number of municipal contracts. Lectures were given at the DHO training school on all phases of bridge construction, and the staff participated in several construction seminars at District offices.

ENGINEERING SURVEYS OFFICE

This Office is responsible for all engineering survey work and the preparation of many types of engineering drawings relative to planning and design requirements; the surveying, compilation and distribution of Vertical and Co-ordinate Control; the preparation and distribution of Strip Plans, and the training of personnel within the Office.

Head Office personnel were responsible this year for completing 16 Precise Level Routes in which 460 first order Precise Level Bench Marks were established for a distance of 510 miles; 16 Co-ordinate Control Routes in which 1,017 third order reference stations were established for a distance of 195 miles.

These Vertical and Co-ordinate Control Routes were processed by the Computation Group and the results distributed to 22 Government and Municipal Engineering Offices. Thirty Vertical Control Route sketches were prepared and copies supplied to the Federal Government.

The Strip Plan Group was responsible for preparing, updating and distributing some 329 Strip Plans to 70 agencies within the Department. This year 30 new Strip Plans were prepared and 136 were updated.

This year 10 qualifying examinations were given in which 84 candidates participated. Four examinations were in the Drafting Technician series and six in the Survey Technician series.

The five Regional Groups ran a total of 1,439 miles of surveys, and 1,248 miles of plans and profiles were prepared. In addition, 738 miles of cross section were taken, of which 309 miles were originals, 206 were preliminary and 223 miles were for resurfacing.

The following special surveys were run and plans prepared:

- 75 Bridge Site Surveys and plans
- 44 Railway Crossing Surveys and plans
- 9 Energy Board Surveys and plans
- 23 Patrol Yard Surveys and 12 Patrol Yard Plans
- 6 Commuter Station Surveys
- 162 Railway Crossing Sites were taken for Program Inventory.

PHOTOGRAMMETRY OFFICE

Developments during the past fiscal year solidified the transition of a portion of this Office from a primarily drafting-oriented operation to a full-fledged Automatic Data Processing unit with the acquisition and implementation of a Gerber Automatic Drafting Machine System containing a Hewlett-Packard 2116B computer.

Technologically, this Office now leads the world in the application of automated computer-based techniques to solution of the survey process. The system, with its related hardware and software facilities, greatly increases the service offered to various Branches both outside and within the Department. When comparing the new automated system to the older traditional process, the Department is beginning to realize projected savings of: 40% in unit cost; 58% in manhours; and 75 to 80% in speed of production.

Internal advances made with the ADM system included: fully automated production topographic mapping; plotting on the Gerber 1232 ADM system of magnetic tapes produced by stereoscopic observation on the Zeiss planimats; and the decoding of Photogrammetry Office magnetic tapes on the 360/65, insuring full compatibility between ECB and Photogrammetry computer systems.

Productions by the Photogrammetry Office during the year included:

- Mosaics covering 7,122 square miles.
- Reproducible Sepiaflex covering 4,258 square miles.
- Area studies covering some 1,400 square miles.
- Functional B plans covering 112,768 acres.
- Design plans covering 18,802 acres.
- Drainage studies covering 404 square miles.
- Hydrology studies covering 1,573 square miles.

Research and Transportation Systems Branch

On April 1, 1970, the Research Branch was expanded to include the Transit Planning and Transit Operations Offices, and to reflect these and other increasing activities in the field of transportation research, the Branch was renamed the Research and Transportation Systems Branch.

TRANSIT OPERATIONS OFFICE

In September, 1970, GO Transit enlarged its operations by entering into an agreement with Gray Coach Lines for the integration and expansion of bus services in the three corridors from Toronto to Hamilton, Oshawa and Newmarket. New bus services were added between Oakville and Hamilton, Pickering and Oshawa, and north to Newmarket and Barrie.



At Pickering GO Station, GO train service is integrated with Mini-bus and GO bus service. Mini-buses deliver passengers from surrounding Bay Ridges area to platform on far side of locomotive, while GO bus, in foreground, delivers passengers from Oshawa and points between to entrance of a tunnel through which they proceed to join others on train platform.

A new demand actuated feeder bus service known as Dial-a-Bus was introduced in July, 1970, in the Bay Ridges-Frenchman Bay area of Pickering Township. This was an experimental demonstration project introduced to measure the demand for a highly passenger-oriented feeder bus service between the GO Transit Pickering station and the surrounding residential area. The service was expanded in February, 1971, to include local trips within the residential area for passengers not necessarily oriented to the GO station.

STATISTICAL RESULTS

Rail Service: GO Transit trains recorded a total of 5,273,237 passenger trips for fiscal 1970-71, an increase of nine per cent over the preceding year. The increase was due primarily to the expanded bus service beyond Oakville and Pickering, plus the continuing popularity of the rail service in the communities served. The operating cost per passenger trip averaged \$.955 and revenue was \$.679, resulting in a deficit of \$.276 for each passenger trip. The deficit was 23 per cent lower than the average deficit per passenger during the previous year. The average on-time train performance was 92.8 per cent.

Bus Service: A total of 1,658,052 passengers was carried on GO Transit buses for the period September 8, 1970, to March 31, 1971.

Dial-a-Bus Service: The Pickering dial-a-bus service recorded 80,890 passenger trips between the GO station and the Bay Ridges residential area for the period July 6, 1970, to March 31, 1971. An average of 250 trips per day was recorded at the commencement of the service and this rose to 475 trips in March 1971. In addition, the average number of local trips per day was 70 during the month of March.

TRANSIT PLANNING OFFICE

The Transit Planning Office was formed in 1970 as part of the newly organized Research and Transportation Systems Branch. Its primary objectives were: to define short and long-term transit needs, provide planning assistance to municipal transit systems and improve the level and cost effectiveness of transit services through demonstration projects. Additional objectives were to provide higher levels of transit service through planning and the introduction of new technology, and to plan the expansion of the GO Transit System.

Special projects undertaken in conjunction with consultants were aimed at identifying possible Provincial Standards and courses of action. During the year the Transit Planning Office completed the planning for the express bus service between Toronto-Oshawa, Toronto-Hamilton and Toronto-Newmarket; the dial-a-bus in Bay Ridges; and undertook the planning of the GO Transit station location in Ajax; the transit right-of-way feasibility around and within Metro; and the development of transit service in the Northwest area of Metro and within Mississauga; the capacity requirements of the GO Lakeshore and the computerization of GO Transit data.

The Transit Subsidy study carried out by the Municipal Branch was supported by the Transit Planning Office, and Municipal Transit Planning and Utilization studies carried out were concerned with improving current transit operations and the introduction of new transit services. Studies were started in the following municipalities: Sudbury, Kitchener-Waterloo-Galt-Preston-Waterloo County Board, Windsor, Whitby, Brantford, Ottawa, Peterborough, Stratford, Guelph, Oshawa, Orillia, Sarnia, Sault Ste. Marie, Oakville, Hamilton and Thunder Bay.

The following studies were completed by the end of the fiscal year: Cornwall, Kingston, Sudbury (first part) and Windsor (first part).

Work on demonstration projects included the evaluation of the dial-a-bus in Bay Ridges, express bus services between Toronto-Hamilton-Oshawa and Newmarket,

a car pool concept aimed at increasing vehicle occupancy and a freeway parking system for improved commuter service. The Transit Planning Office also participated in the evaluation of new modes of transportation.

Transportation Research

Work has continued on two projects described in previous reports: the development and testing of a multipath travel assignment technique, and investigation of the feasibility of constructing additional passing lane sections on two-lane highways.

Through an inter-agency task force on transportation technology initiated by the Department of Highways, work was begun on the identification of the roles that new transportation technology might play in meeting urban transportation needs.

Information was collected on a wide range of conventional and new transportation system concepts and their associated technologies, and the most promising areas of application were identified. This work is expected to continue through the next phase, in which several promising new systems will be selected and compared with conventional systems for a selected site.

Another project, carried out by the Transportation Research Section in association with the Transit Planning Office, was a home-interview attitude survey regarding use and response to the experimental GO Transit dial-a-bus service in Bay Ridges. This survey enquired as to use characteristics, respondent characteristics, attitudes toward service, and expected response to changes in service.

An investigation of the highway noise problem was initiated during the year to determine what feasible measures the Department could implement to reduce this type of nuisance. To this end, noise measurement and analysis equipment was purchased, and an experimental noise barrier along a section of Highway 401 in Metropolitan Toronto was planned in order to measure the noise reduction attainable through barrier construction.

Engineering Research

The previously proposed new method of controlling heavy vehicle loads was introduced during the year. This new form of regulation ensures that commercial vehicles can be licensed for normal operations at the highest maximum loads consistent with the protection of the highway system from abnormal damage.

Alternative methods of determining pavement strengths were investigated to provide data for a newly devised pavement management system and investigations were continued into many aspects of pavement performance under the wearing effects of studded tires, and an experimental project to evaluate surface courses designed to resist studded tire damage was completed.

Work commenced on the evaluation of new transportation systems and technologies with a view to identifying their roles in future transportation needs.

Branch members represented the Department on technical committees and presented papers to technical organizations concerned with highway engineering. Twenty-two research projects were published, presenting the findings of projects undertaken by Department personnel or through the Ontario Joint Highway Research Programme at Ontario universities.

Effects of Heavy Vehicles on Pavements and Bridges

Research is continuing on the effects of heavy axle-loads, particularly to develop a more complete understanding of the effects of axle loads which exceed the legal maximum. A range of axle loadings is being provided by a special load-testing vehicle with a 100-ton load testing capability and pavement deflection is being measured by using linear potentiometers buried in the pavement under test.

In bridge testing, the deflections, strains and stress and frequency of vibration of the structure are measured, and as testing proceeds on different types of bridges

throughout the province a better understanding will be obtained of their structural behaviour under traffic loads.

The introduction of new regulations for the control of vehicle weights, based on earlier work by the Branch, emphasizes the importance of continuing investigations to ensure the adequacy of the strength of pavements and bridges. Development work on methods of weighing vehicles in motion, at highway speeds, has continued and a trial installation of equipment has been made on one of the more heavily travelled roads near Toronto.

Pavement Research and Evaluation

Alternative methods of evaluating pavement strengths are being investigated which have advantages of greater speed, mobility and cost in providing information for the data bank required for the pavement management system. Analysis of the test results obtained is in progress. A method of economic analysis for determining the cost of alternative design strategies, a flexible pavement design model and an overlay design model are expected to be formulated from this undertaking.

Pavement roughness measurements are continuing as a means of determining objective evaluation of the present performance ratings of pavements. A PCA Roadmeter is being used in conjunction with a pavement photo-inventory vehicle.

Pavement Wear Due to Studded Tires

Based on evidence assembled by the Branch of future consequences on driver safety due to the severe wear occurring to pavements, the erasing of traffic markings and other implications of studded tires, their use is prohibited in the Province after April 30, 1971. Emphasis will now be applied to the evaluation of alternatives to the conventional tire studs which may prove suitable as winter driving aids. The testing of some of these devices is being undertaken on Lake Timiskaming by the Canada Safety Council, with assistance from the Department.

A motion picture film concerning studded tires was made to record some of the investigations undertaken and the findings. This film has received a wide viewing by both technical and general interest audiences.

The monitoring of pavement skid resistance by means of a stereo-photographic inventory method of assigning skid numbers is continuing and data is being accumulated on accidents and highway geometrics to determine limiting skid number criteria for various highway situations.

Additionally, the Branch is continuing a number of studies, in conjunction with Ontario universities, which are aimed at the improvement of present engineering practices and materials used in the construction of pavements and structures.

Technical Reports

Twenty-two technical reports were published during the fiscal year. Sixteen of these were prepared by Department staff and six were prepared from reports received from Ontario universities which resulted from research projects carried out under the Ontario Joint Highway Research Programme.

The following reports were prepared by Department staff:

'Studies of Studded Tire Damage and Performance in Ontario — Winter, 1969-70', by P. Smith and R. Schonfeld (Research and Transportation Systems Branch).

'A Proposed Method of Regulating Vehicle Weights in Ontario', by M. D. Armstrong, F. W. Jung and W. A. Phang (Research and Transportation Systems Branch).

'Noise and Vibration Control for Transportation Systems', by M. D. Harmelink (Research and Transportation Systems Branch).

'Transportation Air Pollution', by M. D. Harmelink and W. J. Peck (Research and Transportation Systems Branch).

'An Evaluation of Surface Course Mixes Designed to Resist Studded Tire Wear', by H. Fromm (Research and Transportation Systems Branch) and J. Corkill (Operations Branch).

'Measurements of Vibration Caused by Construction Equipment and Blasting', by L. M. Brown (Research and Transportation Systems Branch).

'Seven Day Ring-Tensile Strength of Cement Mortars', by G. J. Weaver (Operations Branch).

'Highway Maintenance Management in Ontario: A Progress Report', by F. Rendulic and T. A. Hickey (Operations Branch).

'Noise and Vibration Control for Transportation Systems', by M. D. Harmelink (Research and Transportation Systems Branch) (Special Report for Transportation Technology Task Force).

'Transportation Air Pollution', by M. D. Harmelink and W. J. Peck (Research and Transportation Systems Branch) (Special Report for Transportation Technology Task Force).

'Temperature Susceptibility Control in Ashphalt Cement Specifications', by H. Fromm and W. A. Phang (Research and Transportation Systems Branch).

'The Condition of Concrete Pavements in Ontario: Interim Report', by H. Tiede (Operations Branch), C. Sparling (District 11), P. Smith and W. A. Phang (Research and Transportation Systems Branch).

'Use of the Vane Test to Determine the Strength of Organic Soils', by D. A. Sangrey and R. P. Northwood (Queen's University, Kingston).

'The Effect of Seasonal Strength Variation on the Performance of Selected Base Materials', by W. A. Phang (Research and Transportation Systems Branch).

Other reports published by the Department under the Ontario Joint Highway Research Programme:

'Analytical Rectification in Highway Engineering', by K. Wilson and J. Vlcek. (Final report on Project T-26, University of Toronto).

'A Cyclic Creep Study of Pavement Materials', by I. Holubec and K. H. Wilson. (Final report on Project W-15, University of Waterloo).

'Safety Aspects of Intersection Control Devices', by P. Roer and W. A. McLaughlin. (Final report on W-7, University of Waterloo).

'An Investigation of the Ultimate Sheer Strength of Two-Way Continuous Bridge Slabs Subjected to Concentrated Loads', by B. dev. Batchelor and P. Y. Tong. (Report on Project Q-43, Queen's University, Kingston).

'Curvature Meter Design and Evaluation' by L. F. Pepino', by D. O. Hodgins and F. Green. (Report on Project W-12, (Part 1), University of Waterloo).

Operations Branch

The Operations Branch consists of four Offices: Construction, Maintenance, Municipal Roads, and Materials and Testing. Employing approximately 75 per cent of the Department's total staff, this Branch covers the entire province through 18 operating districts.

A total of 354 contracts was awarded during the fiscal year, 158 for Maintenance and 196 for Construction.

CONSTRUCTION OFFICE

This Office is responsible for the direction of the construction program for the entire province, producing and revising contract and general specifications, direction of the



Men and machines at work in grading and drilling operations on Highway 17 between Copper Cliff and Highway 536.

Operations Branch Construction Technician Training Program, control of construction personnel, and the revising of manuals pertaining to construction.

The freeway reconstruction program proceeded on schedule on the Toronto By-Pass section of Highway 27 and 401 during the year, as did the construction of the service roads on the Queen Elizabeth Way from Hamilton towards Niagara Falls. The widening of the Queen Elizabeth Way from Oakville westerly was completed.

The freeway construction program proceeded on the Kitchener-Waterloo Expressway, Highway 406 south of St. Catharines, Highway 417 east and west of Ottawa, and the E. C. Row Expressway in Windsor. Highway 144, Sudbury to Timmins, was opened to through traffic in 1970 as scheduled.

In addition to the large projects, reconstruction of various major and secondary highways and the building of many new structures were undertaken during the year.

TABLE SHOWING TOTALS OF WORK DONE

Class of Work	No.	Tons	Miles
Automatic Signals at Railway Crossings	7		
Bituminous Hot Mix Pavement		2,054,872	720.45
Bituminous Mulch and Cold Mix		78,772	1,284.84
Bituminous Prime on Gravel Roads Gals.	2,158,809		
Bituminous Resurfacing Old Pavement		712,366	626.82
Bituminous Surface Treatment Gals.	1,512,928		
Bridges Built	59		
Bridges Painted	85		
Calcium Dust Layer — Gravel Roads		4,317	577.50
Calicum for De-Icing Roads		6	
Concrete Base Pav't. Asphalt Top		261,270	18.93
Concrete Pavement		546,926 (s.y.)	10.61
Crushed Gravel and Stone (by Contract)		9,624,932	
Crushed Gravel and Stone (by Dept. Forces)		707,666	
Grading and Culverts			650.51
Granular Base on New Grading		10,918,012	576.02
Granular Base on Old Grading		936,548	258.31
New Buildings Erected This Year	37		
Off-Road Parks Maintained	232		
Roads Snowplowed and Kept Open (King's Hwys.)			11,386.26
Roads Snowplowed and Kept Open (Sec. Hwys.)			4,418.22
Roadside Picnic Places Maintained	588		
Routine Maintenance (King's Hwys.)			11,386.26
Routine Maintenance (Sec. Hwys.)			4,418.22
Salt for De-Icing Roads (Raw)		317,629	
Salt in Sand, Stockpiled		45,635	
Sand for Winter Maintenance		806,671	
Scale Houses Maintained	44		
Seeding by Department Forces Acre	2,504.5		
Shrubs Received and Planted	36,250		
Signs Newly Erected or Replaced	109,755		
Snow Hedges Planted this Year			0.75
Snow Fence Erected, Dismantled, Stored			767.00
Traffic Lights Installed this Year	26		
Weed Control			15,259
Zone Painting (King's Hwys. & Sec. Hwys.) Gals.	248,997		12,187
Development Roads Built			64.84

SOUTHWESTERN REGION

Chatham, London, Stratford and Owen Sound Districts

The construction of Windsor's E. C. Row Expressway, Chatham District's first urban expressway and probably the most complex project to date, commenced in July, 1970.

On Highway 3, grading and drainage from Maidstone to Leamington was completed, as was grading and paving from Eagle to the Kent County line.

Grading and paving on Highway 4 from Highway 7 north to Lucan and from the Chesapeake and Ohio Railway in St. Thomas to the New York Central Trestle was completed. The structures over the Little Ausable River and the Saugeen River were completed and opened to traffic. A major grading contract was completed between Hanover and Walkerton.



Recognizing a good location when they see one, enterprising youngsters set up a soft drink stand at grading site on Highway 4 in the Town of Walkerton.

On Highway 6, grading, drainage, granular base and hot mix paving was completed from 0.4 miles south of County Road 34 northerly for 0.98 miles. From Arthur north limits northerly for 7.20 miles was also completed. The Judges Creek Bridge was completed. Work continues on the lift bridge over the Lynn River in Port Dover with the completion expected in April, 1971.

On Highways 7 and 8 on the New Hamburg Diversion, intersection improvements at various locations were carried out.

On Highway 9, grading, drainage, granular base and hot mix paving from Harriston south limits southeasterly to 1.5 miles east of Tiviotdale, including the Maitland River tributary structure, a distance of 8.03 miles, was completed.

On Highways 10 and 24, grading, drainage, granular base and hot mix paving from Primrose westerly to Shelburne, a distance of 2.64 miles, was completed.

On Highway 19, grading and paving was completed from Mount Elgin to Ingersoll, including Highway 401 interchange ramps, a distance of 6.5 miles.

On Highway 21, grading, drainage, granular base and hot mix paving, including the Clark Creek Bridge 1.1 miles north of Highway 84, a distance of 0.42 miles, was completed.

On Highway 23, grading, drainage, granular base and hot mix paving was completed from Mitchell north limits to south of Monkton, including work in Bornholm and Rolph drain culvert, a distance of 9.02 miles.

On Highway 24 from 0.10 miles north of Highway 3 northerly for 2.28 miles, grading and paving was completed.

Highway 26 was resurfaced from Meaford south limits to Thornbury north limits, a distance of 7.0 miles. Grading, drainage, granular base and hot mix paving, including a structure at the Batteaux River, from Stayner north limits to the Town of Collingwood east limits, a distance of 8.02 miles, was completed.

Surface treatment was carried out on Highway 59 from south of Norwich to the Michigan Central Railroad, a distance of 6.4 miles.

On Highway 89, grading, drainage and granular base was completed from 0.15 miles south of Highway 87 to 0.85 miles north of Highway 23, 4.09 miles.

Surface treatment was carried out on Highway 97 from Highway 59, Hickson, to 1.4 miles south of Plattsville, a distance of 11 miles.

Curves on Highway 401 west of Roseville were widened.

An interchange was constructed at the Junction of Highway 402 and Indian Road in the City of Sarnia.

CENTRAL REGION

Toronto, Hamilton and Port Hope Districts

On the Macdonald-Cartier Freeway construction in Metropolitan Toronto saw completion of the large interchange at Highways 27 and 5, as well as the completion of two contracts which will form part of the interchange on Highways 401 and 27.

Resurfacing in both the eastbound and westbound lanes from 5.1 miles east of Highway 35 easterly for 7.37 miles was completed.

On the Queen Elizabeth Way six lanes on both the east and west routes are now in service from the Guelph Line interchange to Toronto, as the section from Kerr Street, Oakville, to Highway 25 has been completed, and the section from Highway 25 to Guelph Line is nearing completion. Resurfacing have been completed from the Burlington Street interchange to the south end of the Burlington Bay Skyway. Work continued to provide service roads along the QEW from Stoney Creek to St.

Catharines, with roads now being open to traffic from Stoney Creek to 0.5 miles west of Grimsby, and from 2.0 miles east of Grimsby to the St. Catharines city limits.

On Highway 2, a new bridge and approaches have been completed over Twelve Mile (Bronte) Creek. The grading and paving portion of the structure and approaches over the Canadian Pacific Railway 1.1 miles east of Port Hope was completed.

Reconstruction of Highway 3 from 6.7 miles west of Fort Erie westerly for 6.8 miles is now completed.

Resurfacing has been completed on Highways 5 and 24 from Osborne's Corners to Howell's Corners, a distance of 2.65 miles.

On Highway 6, resurfacing has been completed from Hamilton south limits southerly for 4.74 miles.



Down with the old and up with the new — While demolition of the Rathburn Road Bridge to allow widening of Highway 27 to ten lanes proceeds (above), pile driving operations begin for the new bridge at Burnamthorpe Road.



On Highway 7, grading and paving from 0.4 miles east of Georgetown's north limits to Acton, a distance of 6.9 miles, is nearing completion.

Paving on Highway 7A was completed from the north junction of Highway 35 westerly for 8.2 miles.

A section of Highway 9 from Highway 27 to Highway 50 was reconstructed.

On Highway 33, grading, drainage, granular base and hot mix paving at the approaches to the Canadian National Railway subway north of Trenton was completed.

Resurfacing on Highway 53 from Hamilton east limits easterly for 3.7 miles was completed.

Paving on Highway 115 from 7.5 miles west of Highway 28 to Highway 35 was completed.

On Highway 406, a major grading and structure contract is nearing completion. This will allow traffic to continue from Beaverdams Road to Highway 58 at Welland.

On Highway 503, a new structure was built over the Dalrymple Lake Narrows 10.6 miles north of Highway 46 at Kirkfield. This is a timber structure with a concrete deck.

The Kitchener-Waterloo Expressway has been completed from Frederick Street to King Street, a project involving two underpasses, one overpass and four interchanges to accommodate access and cross traffic.



For safety reasons there is no driver in the cab as this truck and trailer with a gross weight of 100 tons proceeds under remote control on a bridge-testing mission. Built to Department specifications, the 20-gear machine is believed to be the world's heaviest load-testing vehicle.

EASTERN REGION

Kingston, Ottawa and Bancroft Districts

On the Macdonald-Cartier Freeway, the approaches to the structure at Brookdale Avenue in the City of Cornwall and the approaches to the two structures at the Canadian Pacific Railway east of Cornwall were reconstructed. Resurfacing and structure waterproofing with hot rubberized mastic asphalt between Wymans Road and Tyendinaga-Thurlow Township Line was completed.

On Highway 2, intersection improvements in the Village of Shannonville and in the Hamlet of Westbrook along with resurfacing from 2.0 miles west of Belleville to Shannonville were finished.

On Highway 7 T.C., grading, drainage, granular base and hot mix paving from Marmora to Madoc was completed. Resurfacing began for 14.39 miles from 6.5 miles west of Highway 37 to 5.1 miles east of Highway 37, including the Madoc Diversion and was fifty per cent complete before winter shutdown. Grading, drainage, granular base and hot mix paving on the Kanata Road from the Queensway extension southerly on Highway 7 commenced and will be completed in 1971. Reconstruction of a major traffic route, in an urban area, from two lanes to four lanes and the elimination of a level crossing over the main transcontinental lines of the Canadian Pacific Railway and the Canadian National Railway was completed.

On Highway 14, major reconstruction from Foxboro northerly 6.5 miles to Stirling began and hot mix base course was placed before winter freeze-up.

On Highway 16, resurfacing, shoulder widening and site distance improvement from Becketts Bridge to 2.0 miles south of North Gower was completed.

On Highway 17, resurfacing was carried out from Plantagenet to Alfred west limits. Resurfacing from the east end of the Queensway to Rockland was 75 per cent completed; included was the major intersection improvement at the Orleans intersection, which was widened to four lanes, illuminated, and traffic lights installed.

Grading, drainage, and hot mix paving of a portion of the four lane divided Ottawa Queensway extension westerly to connect with Highway 7 was completed. Muskrat River Bridge 8.0 miles south of Pembroke south limits was completed and opened to traffic.

On Highway 28, grading, drainage, granular base and hot mix paving from junction of Highways 504 and 28 northerly for 9.10 miles was finished.

Highway 31 was resurfaced from Ottawa city limits to one mile north of Winchester. On Highway 38 two major contracts for reconstruction from the junction of Highway 7 southerly to the south limits of Sharbot Lake Causeway, including the Village of Sharbot, and from Tichborne southerly to Hinchinbrooke, a distance of 11.27 miles, began with completion expected in the fall of 1972.

Hot mix paving on Highway 41 from 1.8 miles north of Cloyne northerly for 11 miles was completed. Grading and drainage from 0.5 miles north of junction of Highways 132 and 41 southerly for 8.0 miles was also completed.

Highway 43 was resurfaced from Highway 31 to the west limits of Finch, excluding 1.64 miles in Chesterville.

On Highway 60 hot mix paving was completed from Highway 127 easterly for 11.10 miles.

On Highway 62, grading, drainage, granular base and hot mix paving from Maple Leaf westerly to 1.3 miles south of Maynooth, a distance of 6.83 miles, was completed.

On Highway 138, reconstruction from St. Andrews to Monkland was completed.

On Highway 416, with the award of five major contracts for grading, drainage, granular base and hot mix paving during this construction season, approximately 24 miles of highway on new alignment is presently under construction from the junction

of the Macdonald-Cartier Freeway to Regional Road 13. Included in these contracts are structures over the Canadian Pacific Railway and the Rideau River Channel.

On Highway 417 the grading from Ramsayville to Vars was completed. The grading on the westbound lane from the Quebec boundary westerly for 5.6 miles was 70 per cent completed. Grading contracts were awarded for the section from Vars to Casselman. This work will be completed in 1972. Two paving contracts were awarded from Ramsayville to Vars. These contracts included structures at Anderson Road, 7th Line of Gloucester, Bear Brook westbound lane, 8th Line of Gloucester and at the Boundary Road between Gloucester and Cumberland. Work is expected to be completed early in the Summer of 1972.

On Highway 500, grading, drainage and granular base was completed from Bancroft east limits easterly for 5.89 miles.

NORTHERN REGION

Huntsville, Sudbury, North Bay and New Liskeard Districts

On Highway 11 the Gravenhurst Bypass proceeded with the completion of the Gull Lake structures and the paving and opening to traffic of the four lanes, a distance of 4.25 miles. Resurfacing was carried out from the south junction of Highway 11B at Huntsville northerly to Novar, and from the junction of Highway 112 northerly for 3.0 miles paving was completed. Hot mix paving from Latchford northerly for 7.41 miles was completed. Grading, drainage, granular base and hot mix paving was completed from 10 miles north of Timagami northerly to the Montreal River in Latchford. Hot mix paving was carried out from 0.71 miles south of Highway 654 northerly for 4.09 miles.

Highway 11B, from the junction of Highway 60 northerly to the north junction of Highway 11 was resurfaced. The grading from the junction of Highway 69 easterly for 2.16 miles was completed.

At North Bay, on the Bypass combining Highways 11 and 17, two major intersections at Fisher Street and Cassells Street were rebuilt.

On Highway 17 grading, drainage, granular base, and hot mix paving from 1.6 miles west of Mattawa west limits easterly for 3.12 miles, including a structure over the Canadian Pacific Railway, was completed. Grading, drainage, granular base and hot mix paving was completed from the intersection of Highways 533 and 17 easterly to the C.P.R. Overhead and from 1.6 miles west of Mattawa west limits westerly, a distance of 3.3 miles. Construction of the new C.P.R. Overhead and approaches at Deux Rivieres, started last year, was completed. From 0.9 miles east of Bissett Creek easterly to Station Road in Stonecliffe, the grading, drainage, granular base and structure (Grant Creek Bridge extension), a distance of 7.65 miles was completed. From Stonecliffe easterly for 9.54 miles grading, drainage, granular base and hot mix paving was started and most of the rock excavation, culvert and drainage work was completed by the end of the year. Construction of the Veuve River Bridge began and will be completed by early summer.

On Trans-Canada Highway 17 paving was completed at the following locations: from the junction of Highway 546 easterly for 11.77 miles; East Sault Ste. Marie diversion 3.13 miles; from 0.2 miles south of Highway 556 northerly for 14.30 miles; from 10 miles north of Wawa northerly for 9.60 miles; from Montreal River northerly for 9.50 miles; and from Chippewa Falls southerly 7.80 miles and northerly 16.86 miles.

Construction of a section from Highway 536 westerly for 17.50 miles, including improvements of structures and approaches at Moxam Creek, Vermillion River, C.P.R. Overheads at Nairn and Spanish River, were completed.

The reconstruction of Highway 35 continued with grading from 8.01 miles north of Norland for 7.50 miles. Upon completion, this and a previous grading job immediately south from 3.70 miles north of Norland northerly for 13.13 miles, were paved.



Completed stretch of Highway 144 between Sudbury and Timmins was opened officially on September 25, 1970, when car bearing former Premier John Roberts and former Highways Minister George Gomme broke through road-wide paper sign.

On Highway 60 at various locations from Highway 11B easterly to Dwight, hot mix patching and frost area treatments were carried out.

Grading, drainage and granular base was completed on Highway 64 from 3.4 to 4.4 miles north of Field.

On Highway 65 grading, drainage and granular base from one mile west of Kenabeek westerly for 8.4 miles, and from Kenabeek easterly for 8.1 miles, was completed.

Hot mix paving on Highway 66 from Chaput Hughes westerly to the junction of Highway 11 was completed with the exception of the last lift of hot mix paving, from Swastika to Kenogami and final trim of shoulders.

On Highway 68 grading was completed from 0.33 miles south of Highway 542 southerly for 7.68 miles. Rebuilding of the highway from 11.9 miles south of Sheguindah southerly for 6.57 miles began and will be completed by the summer of 1971.

On Highway 69 paving from Bala southerly for 11.8 miles was completed. From Bala northerly, a grading, structures and hot mix paving contract was awarded. The grading and the two new structures eliminating a level crossing of the C.P.R. and replacing a dangerous overhead timber structure over the C.N.R. was completed, and paving was started with completion expected in the summer of 1971. The final section of the Trans-Canada was completed from the junction of Highway 637 to French River.

On Highway 101 paving was completed from 14.6 miles east of the north junction of Highway 129 easterly for 13.72 miles. Grading, drainage, granular base and hot mix paving from 10.6 miles west of Highway 576 westerly for 9.41 miles was completed.

Clearing was completed from 15 miles west of Foleyet westerly for 14.7 miles and grading, drainage, granular base and hot mix paving began and is expected to be completed next year.

The reconstruction of Highway 124 continued with completion of grading, drainage and granular base from 4.8 miles east of Highway 69 easterly for 4.04 miles. Paving will be finished in 1971.

On Highway 129 grading, drainage and granular base from 10.9 miles south of the south junction of Highway 101 southerly and from 4.5 miles south of the Mississagi River Bridge northerly, a total distance of 11.99 miles, was completed.

On Highway 144 grading, drainage and granular base was completed from approximately 42.54 miles north of Benny northerly for 8.86 miles. The laying of binder course pavement from 27 miles south of Highway 101 southerly for 6.0 miles was completed. In the New Liskeard District the final link with the Sudbury District from 32.73 miles north of Benny was completed. In the Sudbury District the final grading was completed and the highway was officially opened by Prime Minister John Roberts.

Paving was completed on Highway 516 from Highway 11 to the junction of Highway 532, a distance of 5.01 miles.

On Highway 533 grading, drainage, granular base and hot mix paving from Highway 17 in Mattawa northerly for 0.79 miles was completed.

Grading, drainage, granular base and hot mix paving on Highway 629 from 1.3 miles south of Timmins north limits to Timmins Airport, a distance of 6.29 miles, was completed.

On Highway 631 paving was completed from Highway 17 northerly for 12.52 miles. Grading on Highway 660 from 0.8 miles east of Highway 103 easterly for 4.05 miles was completed.

NORTHWESTERN AREA

Cochrane, Thunder Bay, Sault Ste. Marie and Kenora Districts

Work continued on the Thunder Bay Expressway and paved sections between (a) Arthur Street and the Golf Links Road, and (b) Spruce River Road and McKenzie, were completed.

On Highway 11 from 8.45 miles north of junction of Highways 11 and 17 northerly for 11.5 miles, a major reconstruction contract was completed. Work also commenced on further major reconstruction from the northerly limit of this contract for an additional 10.7 miles. Grading, drainage, granular base and paving from Strickland to Fauquier was finished, as was the resurfacing from Cochrane to Driftwood. Resurfacing was completed from Smooth Rock Falls to Strickland and from 0.1 miles west of the Shekak River westerly to the Fraser River.

On Highway 17 T.C. grading and paving from Oxdrift westerly for 13.65 miles was completed. Surface course paving from Longbow Corners easterly for 29.4 miles and from Sixth Street in Keewatin westerly for 9.56 miles was finished, as was from Dryden easterly 9.45 miles and Dryden westerly 6.99 miles. The Cameron Bay Bridge in Kenora was completed and opened to traffic in the early fall. Top course paving from English River westerly for 25.4 miles and from Nipigon easterly for 30.6 miles was completed.

On Highways 11A and 17A, major grading, drainage, granular base and paving through heavy rock terrain requiring extensive realignment was completed from 4.6 miles east of Sistonen's Corners easterly for 5.0 miles.

On Highway 61, grading, drainage, granular base and paving from Highway 130 easterly for 9.0 miles, including a new structure at Mosquito Creek, was completed.

On Highway 71, clearing from the junction of Highway 11 southerly for 10.9 miles was finished. Grading, from 8.92 miles north of Nestor Falls northerly for 8.23 miles was almost completed.

On Highway 72, grading and paving from Highway 116 northerly for 4.98 miles will be completed by late spring, 1971.

On Highway 116, grading from 3.2 miles west of Highway 72 westerly to Hudson was completed.

On Highway 578, complete reconstruction from the junction of Highway 11 easterly for 4.2 miles was completed.

Two upgrading contracts, each 7.0 miles in length on Highway 599 from Central Patricia southerly began, with the first 7.0 miles being completed and the remainder substantially completed.

One mile of Highway 626 through the Hamlet of Val Gagne was completely reconstructed.

The remaining 5.4 miles of clearing from 28 miles to 37.4 miles south of Hornepayne for the extension of Highway 631 from Hornepayne to Highway 17 was completed.

MAINTENANCE OFFICE

Highways are no better than the maintenance they receive, a fact reflected in a high degree of driver safety and the protection afforded taxpayers' investment in our highway system.

The Maintenance Office directs and controls all summer and winter maintenance carried out by the Districts on all King's Highways and Secondary Highways throughout the province. These operations cover all aspects of maintenance within the highway right-of-way, including the travelled surface, shoulders, drainage, roadside safety devices, snow and ice control, zone painting, the design of minor structures and Bailey bridges, inspection of all structures and the design and supervision of major repair work to existing structures. Construction work by Day Labour forces, the design and care of all landscaping work along highways, and the design and installation of highway lighting and traffic signals also come under the direction of this Office.

Crushing Plant

Working in Cochrane, Thunder Bay and Kenora Districts, the Department crusher produced 130,520 tons of $\frac{5}{8}$ crushed gravel, of which 19,988 tons were placed directly on Secondary Highways in the Cochrane and Thunder Bay Districts. In addition, 15,800 tons of $\frac{1}{2}$ " chips and 27,650 tons of sand were produced and stockpiled at the various pit locations.

Mulch Pavement

Mulch pavement mixed and laid by Department forces totalled 33.1 miles in six Districts.

Zone Painting

The Department had 22 paint strippers in operation this year, 18 dual and four single machines, which painted 12,187 miles of King's and Secondary Highways. In addition, yellow paint was applied along the pavement edge for a total of 5,057 miles.

The zone stripper replacement program resulted in new dual striping units going to Bancroft and New Liskeard, both of which were designed and built as airless spray units.



The winter of 1970-71 was one of the most severe in several years and snow blowers were called in frequently to help keep roads open.

Signs

District forces manufactured and erected 109,755 signs of various types and sizes, ranging from fingerboards and other guide signs, intersection and curve signs to large cantilever and overhead extruded aluminum signs.

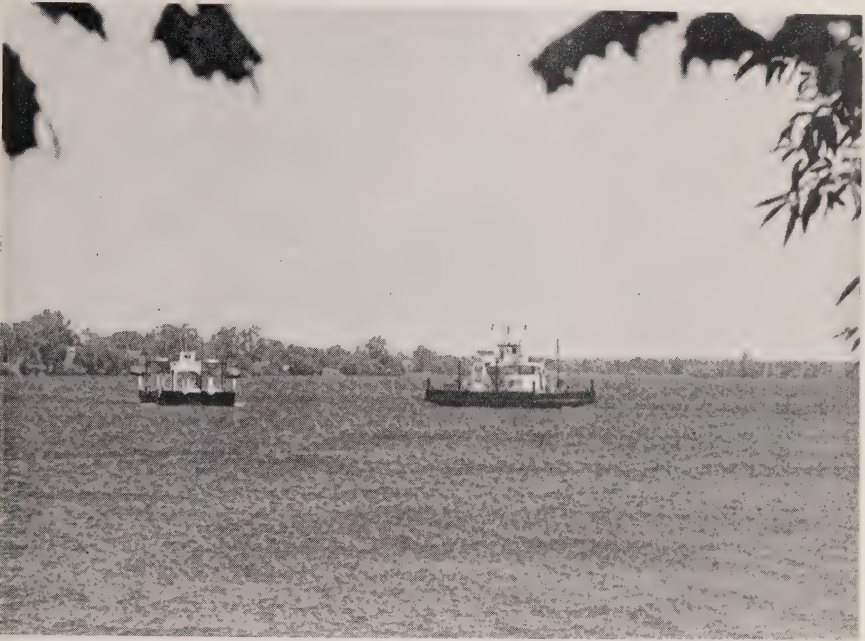
Winter Maintenance

The winter of 1970-71 was one of the most severe for several years. The frequency and duration of snowstorms resulted in considerably more plowing than average, and the application of 807,000 tons of abrasives and 363,000 tons of de-icing chemical was also above previous years.

The Department's program of preventing chemical contamination of soil and ground waters in the vicinity of winter sand and salt stockpiles continued with the construction of 18 Fitzpatrick domes, bringing the total of such structures to 33. These structures were all constructed by Department forces with the exception of two in the Toronto District, which were done by contract. Locations for domes are decided on a priority basis determined by the contamination problems, potential or real, at stockpile sites.

Highway Lighting and Signals

During the year Department electrical crews installed 1,953 highway lighting fixtures, 43 traffic signals, 51 flashers and 41 sign lighting fixtures.



Meeting part way on their run between Adolphustown and Glenora are the Quinte and the Quinte Loyalist, two of the Department's five-unit "navy" which logged a total of 67,999 trips during the year and gave free passage to 614,724 motor vehicles.

Ferries

The Department maintains five free ferries at three locations in the province.

- Two ferries operating between Kingston and Wolfe Island logged a total of 8,683 trips during the year and carried a total of 183,895 motor vehicles.
- Two ferries operating between Adolphustown and Glenora made a total of 18,638 trips and carried 200,166 motor vehicles.
- A single ferry operating between the mainland and St. Joseph Island made 40,678 trips during the year and carried a total of 230,663 motor vehicles.

Maintenance Management System

The Maintenance Management System is being evaluated continually and improved wherever possible. A revised costing system involving new reporting documents was tested in Owen Sound, Sudbury and Kingston Districts. Although some problems have been experienced, the system is superior to the one currently in use.

Increasing attention has been focused on equipment operations. In conjunction with the Equipment Section we are proceeding with expansion of Maintenance Management to equipment repair. In addition, Maintenance Management is attempting to set equipment complements for each District. The objective here is to ensure better utilization of equipment and to maintain the fleet at minimum cost.

Forestry and Landscape

Approved planting programs carried out during the year accounted for 38,133 trees and shrubs, and the relocating of large trees in the process of road construction added another 278 trees to the total. A total of 16,768 trees was removed in 11 southern Districts for the safety of the travelling public and permits were issued to utility companies for the removal of 395.

Grass seeding operations totalled 23,880,560 square yards; and in a program covering 15,259 miles of right-of-way, herbicide applications involving 24,806 gallons of liquid and 83,475 lbs. of wettable powder were applied in the control of weeds and brush.

In addition, 20,184 lbs. of drift control agents were applied in continuation of newly developed application methods.

Inspection and Maintenance of Bridges

The Bridge Maintenance staff carried out regular inspections of approximately 1,400 bridges on main and Secondary Highways during the year and, where necessary, made recommendations to District Engineers regarding repairs and load restrictions and advised the Programming and Planning Sections concerning replacements.

Several separate investigations were carried out at the request of Districts in connection with damage due to such causes as vehicle impact and floods, and major steel repairs were made on seven bridges.

Waterproofing of bridge decks was continued with the application of a membrane consisting of rubberized mastic or Uniroyal. The use of emulsified asphalt was discontinued.

Rockfilled gabions were installed at several structures throughout the province for the retention of unstable fill slopes, prevention of scour, or as a foundation for supplementary span supports.

Eight temporary detour structures consisting of Bailey bridges were designed and a semi-permanent Bailey bridge was constructed over the Canard River in the Chatham District after settlement and failure of some of the timber pile bents because of overloading. Many other Bailey bridges were designed and checked and built by District Day Labour or Municipal forces for indefinite use as replacements or reinforcements for faulty existing bridges. Additional Bailey bridges were installed in the Thunder Bay, Sault Ste. Marie and Sudbury Districts following washouts on several Secondary Highways during heavy rainstorms. Several other Baileys were replaced with heavier units to facilitate increased legal loads.

Designs and plans were prepared for a new bridge across the Pine River and new timber decks for the Sioux Narrows and Berry Creek Bridges in the Kenora District.

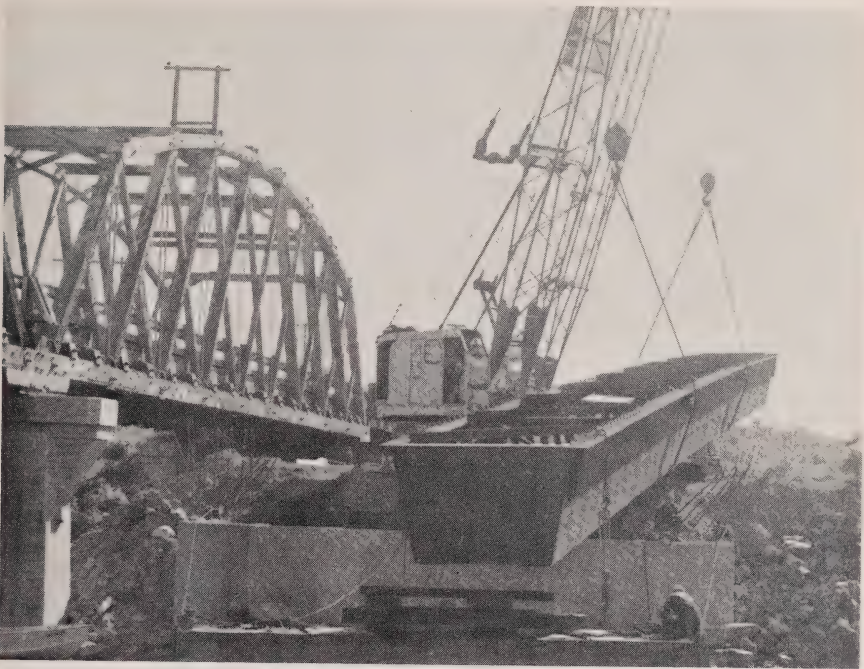
The new decks were placed during the winter without closing the bridges and with very little interruption to traffic. Designs, plans and specifications were also prepared for 15 structures requiring renovation of the bearings of expansion joints. Drawings were prepared for major repairs to several other structures, including the Port Stanley Bascule Bridge and the CNR Overhead at Copper Cliff.

The failure of a bearing seat on one of the piers of the Grand River Bridge in Cayuga necessitated immediate load limitations and eventual closure of the bridge for a short time to allow for emergency repairs.

Painting of 26 bridges and 44,300 linear feet of handrails was completed and an additional 1,500 linear feet of handrail was metallized with zinc.

MUNICIPAL ROADS OFFICE

The 1970 subsidizable expenditures by the municipalities increased by approximately \$23,770,000 over 1969, and by \$164,165,000 over 1960.



Steel section is swung into position on the Cameron Bay Bridge on Highway 17. Bridge was completed and opened to traffic before year's end.

SUBSIDIES SECTION

During the year, 946 municipalities and 49 Indian Reserves received subsidies under The Highway Improvement Act for expenditures in 1970. Aggregate amounts were:

	Road mileage	Approved expenditures	Subsidy
Metro Toronto			
Roads	378.0	\$ 27,462,505	\$ 13,731,253
Subway	—	17,192,381	8,596,190
Counties*	10,239.7	63,564,274	34,513,946
Townships**	53,448.8	95,324,017	55,401,928
Urbans	12,414.1	101,059,822	51,287,976
Grand Total	<u>76,480.6</u>	<u>\$304,602,999</u>	<u>\$163,531,293</u>

*Includes Suburban Commissions and Regional Municipalities

**Includes Boroughs, Improvement Districts and Indian Reserves

COUNTY ROADS

The 1970 expenditure on County and Suburban Roads shows an increase of more than \$920,000 over the 1969 figures. A breakdown of the 1970 expenditure follows:

	Construction	Maintenance	Total
Roads (Winter control excepted)	\$30,608,717	\$11,185,249	\$41,793,966
Bridges and culverts	6,910,086	480,878	7,390,964
Winter control	—	4,733,439	4,733,439
Total approved expenditures	<u>\$37,518,803</u>	<u>\$16,399,566</u>	<u>\$53,918,369</u>

Some understanding of the work represented by these figures can be gained from this summary of the work performed:

1. Roads

385.13 miles completed at a total average cost of \$66,688 per mile.

2. *Bridges and culverts*

(a) Bridges (20' span and over)

53 bridges completed at a total average cost of \$21.94 per square foot of deck area.

(b) Structures (under 20' span)

Total number completed 51

(c) Pipe Culverts installed 3,057

Maintenance

Operation	Miles maintained	Average cost per mile
1. Roadside	9,290	\$ 218.58
2. Hard top	7,049	506.22
3. Loose top	2,241	1,175.30
4. Winter control	9,290	473.66
5. Safety Devices	9,290	126.92
6. Bridge and culvert maintenance	9,290	45.80

CITIES, TOWNS AND VILLAGES

During the year 33 cities, six separated towns, 145 towns and 150 villages spent \$101,059,822 on urban streets and received Government subsidies totalling \$51,287,976.

COUNTY SUBURBAN ROADS

Thirty cities and separated towns in the province have joined with their neighbouring counties to contract and maintain portions of the county road systems of special interest to the cities and separated towns. The 1970 mileages, expenditures, and government aid were as shown below.

County	Suburban Road Commission	Mileage	Approved expenditure	Government subsidy
Brant	Brantford	66.8	\$ 163,001	\$ 82,102
Elgin	St. Thomas	15.0	190,702	135,368
Essex	Windsor	114.4	1,056,052	580,924
Frontenac	Kingston	27.0	158,068	87,936
Grey	Owen Sound	25.9	88,078	45,661
Hastings	Belleville	17.7	108,841	56,945
Kent	Chatham	31.5	115,972	59,800
Lambton	Sarnia	26.3	356,357	200,462
Lanark	Smiths Falls	11.0	14,235	7,118
L & G	Brockville	17.6	63,044	31,522
	Gananoque	6.6	24,640	12,461
	Prescott	6.1	23,260	11,908
	Smiths Falls	2.5	25,901	14,033
Middlesex	London	76.1	621,034	328,437
N & D	Trenton	14.2	59,971	31,009
Ontario	Oshawa	44.7	503,312	253,248
Oxford	Ingersoll	7.0	14,969	7,485
	Woodstock	11.3	122,471	66,957
Perth	St. Marys	15.5	47,321	23,883
	Stratford	29.8	97,865	48,933
Peterborough	Peterborough	35.6	265,621	133,806
Simcoe	Barrie	20.1	71,573	48,674
	Orillia	20.8	47,939	24,183
S. D. & G.	Cornwall	61.0	180,125	95,141
Waterloo	Galt	25.0	148,177	74,597
	Kitchener	64.8	289,303	147,974
	Waterloo	36.8	271,783	187,540
Wellington	Guelph	12.9	199,968	100,583
Wentworth	Hamilton	160.3	1,353,062	522,431
York	Toronto & York Rds.	195.8	4,793,936	2,514,991
	Totals	1,200.1	\$11,476,581	\$5,936,112

INCORPORATED TOWNSHIPS

Five Boroughs, 560 Townships, 18 Improvement Districts and 48 Indian Reserves received aid under the Act in 1970. Expenditures made by these 631 Road Authorities showed an increase over 1969 expenditures of close to \$6,000,000, with a corresponding increase of Government Subsidy of \$2,424,000. A breakdown of the 1970 expenditure follows:

	Construction	Maintenance	Total
Roads (winter control excepted)	\$44,092,397	\$30,717,899	\$74,810,296
Bridges and culverts	8,800,822	1,142,270	9,943,092
Winter control	—	10,570,628	10,570,628
Total approved expenditures	<u>\$52,893,219</u>	<u>\$42,430,797</u>	<u>\$95,324,016</u>

These expenditures provided for the following major items of work:

Construction items:

1. Roads

New or rebuilt gravel and stone surfaces	2,505 miles
Low cost bituminous surfaces	306 miles
High cost bituminous surfaces	74 miles
Graded to standard cross-section	1,486 miles

2. Bridges and Culverts

Bridges (10' span and over): concrete-102; steel-45; timber-19	
Total	185
Culverts (under 10' span): concrete-64; steel-300; timber-20	
Total	384

3. Pipe Culverts Installed	6,942
----------------------------------	-------

Maintenance items:

1. Surface and Drainage

Roadside Ditching	3,811 miles
Bituminous Surface Treatment	1,325 miles
Dust Laying — with Oil	2,527 miles
— with Calcium Chloride	15,931 miles

Resurfacing

Crushed Gravel	2,766,534 cu. yds.
Crushed Stone	192,421 cu. yds.
Pit-Run Gravel	1,042,591 cu. yds.

2. Winter Control

Snow removed	66,057 miles
Snow fence erected	2,210 miles

3. Weed and Brush Control

By spraying	19,321 miles
By cutting	23,519 miles
Culverts repaired	6,544

4. Bridges repaired	871
---------------------------	-----

DIRECT EXPENDITURES SECTION

Development Roads

County roads comprise the greater part of the designations under this program. Under the established financial arrangements between the Department and the counties, supplementary assistance beyond normal subsidy arrangements is directed to eligible counties by means of development road aid. The eligibility of individual counties for this assistance is determined from their actual performance in relation to defined objectives for their desirable county road system.

\$19,404,262 was spent on 136 development road designations of 686.2 miles of roads under the jurisdiction of eligible municipalities. During the fiscal year 35 projects covering 153.4 miles of road were completed, six pre-engineering designations were revoked and 13 new projects were designated.

Locations, mileages and expenditures on development roads are listed in the appendix.

ROADS IN TERRITORY WITHOUT MUNICIPAL ORGANIZATION

Financial assistance is given by the Department to Local Roads Boards, Statute Labour Boards, and groups of settlers in unincorporated areas of the province.

The amount of contribution to Statute Labour Boards was at least equivalent to the value of the Statute Labour. Local Roads Boards benefit from a contribution of twice the amount of local tax moneys expended for road purposes plus an allowance for crown lot frontage. During the year 185 Local Roads Boards were operating and 14 applications for new boards were approved.

Any group of people wishing financial assistance toward work on a public road are given assistance proportional to what they themselves raise. The distribution of aid by districts is listed in the following table:

SUMMARY OF UNINCORPORATED TOWNSHIPS EXPENDITURES IN THE FISCAL YEAR 1970-71

Municipal District	Value of statute labour, local roads or other work performed	Direct expenditure on roads by Department	Total value of work performed	Percentage of aid by Department
10 Nipissing	\$ 6,907.42	\$ 33,201.82	\$ 40,109.24	83%
11 Nipissing, Muskoka and Parry Sound	97,082.20	268,575.36	365,657.56	73
13 Nipissing, Sudbury and Parry Sound	162,016.33	442,342.90	604,359.23	73
14 Timiskaming, Sudbury and Cochrane	79,360.81	147,761.72	227,122.53	65
16 Cochrane	67,601.21	204,519.62	272,120.83	75
17 Sudbury, Algoma, Parry Sound, Manitoulin and Nickel Belt	154,960.08	399,476.95	554,437.03	72
18 Algoma	34,517.32	241,603.70	276,121.02	88
19 Thunder Bay and Rainy River ..	93,991.26	365,491.37	459,482.63	80
20 Kenora and Rainy River	85,946.87	187,022.92	272,969.79	69
Totals	<u>\$782,383.50</u>	<u>\$2,289,996.36</u>	<u>\$3,072,379.86</u>	<u>75</u>

MUNICIPAL STUDIES SECTION

Programming Studies

1. Over the last several years the Department has been encouraging larger Townships and Towns to carry out Road Programming Studies. These Studies assist elected and appointed officials in managing their road system by identifying capital construction requirements and the fixed cost needs of maintenance and administration. Since this program was started in 1961, some 40 municipalities have completed a Road Programming Study. During this fiscal year work was carried out on 26 studies, twelve of which were completed and the reports published:

Albion	Enniskillen
Augusta	Markham (Town)
Balfour	Matilda
Burford	Osgoode
Charlottenburgh	Sarnia
Chatham	Whitchurch-Stouffville (Town)

2. The remaining 14 studies, in various stages of completion, are being carried out in the following municipalities:

Ancaster	Pelham (Town)
Brantford	Townsend
Caradoc	Valley East
Ekfrid	Walpole
Lobo	West Lincoln
Maidstone	Windham
Newmarket (Town)	Zorra East

Municipal Maintenance Management Project

3. This project is an outgrowth of the successful implementation of the Maintenance Management System within the Department. The City of Oshawa and County of Ontario originally participated in the development and testing of a model maintenance management system that could be used by the larger municipalities in the province, and during this fiscal year the system has been installed in the following seven additional municipalities: Region of Ottawa-Carleton, Region of Niagara, Region of York, City of Ottawa, City of Niagara Falls, County of Peel, Town of Mississauga.

PLANS APPROVALS

During the year, municipalities continued to submit pre-engineering data for road construction projects.

Some 1,420 Design Criteria data sheets were received by the Department detailing the proposed geometric standards, estimated costs and type of road improvement desired. This data concerned 1,538 miles of road construction and required some inspection on the sites of the work to determine the design features best suited to the local conditions.

In addition to the design data received, preliminary drawings, contract plans and tendering documents for 407 projects (353 By-Law and 54 Development Road) accounting for 526 miles of road work were also scrutinized.

Examination of pre-engineering data, from initial design criteria to prepared tendering documents, contributes substantially to the objective of attaining an improved municipal road network.

MATERIALS AND TESTING OFFICE

Progress in the construction of safe, well built and long-lasting highways is due in a large degree to the work of scientists, engineers, geologists and technicians engaged in testing and research. They answer the "hows" and "whys" before construction begins, test soils and materials and carry out the research and development required to meet the high standards set for modern highways.

The Materials and Testing Office undertakes field investigations and provides information for pavements and foundation designs; provides technical guidance and general supervision on quality control; tests materials and determines quantity, suitability and compliance with specifications; provides an inspection service at manufacturing plants for pre-qualification and inspection of finished products; investigates and evaluates new materials, products and methods to determine their value for highway use; trains construction and inspection staff in field testing and in quality control procedures, and carries out investigational work to find answers to specific problems.

These functions are performed by the six Head Office Sections: Soils, Foundations, Materials, Chemical, Physical Testing, and Office Engineers, and the five Regional Materials Offices. The Northwestern and the Southwestern Materials Offices were under the administrative control of the Regional Directors.

The Materials and Testing Office also provides information to other Branches and Sections concerned with planning, design, construction and maintenance of highways. Highlights of work of non-routine nature undertaken during the year follow:



Because of poor soil conditions in the area, it was necessary to drive 54,000 ft. of steel pilings before construction crews could proceed with work on structure on Highway 417 at Anderson Road.

1. *Insulation of pavements*

As a result of a number of field trials with "expanded polystyrene insulation", it was found that a modified design at the ends of the installation improves the treatment of frost heaves.

2. *Road Logger*

The Road Logger, a nuclear measuring device for moisture and density control of earth and granular materials, was evaluated. A report entitled "An Evaluation of the Road Logger in Ontario", was published.

3. *Glasphalt*

Technical assistance was provided for the design and construction of two test sections incorporating glass in the asphalt mixture. A report "Crushed Glass in Asphalt Pavement Construction: a feasibility study", was published.

4. *Liquid plastic coating of sand-salt stockpiles*

Trial applications of a liquid plastic coating on sand-salt stockpiles were made in two Districts to reduce the leaching of the salt from the stockpiles. The results were promising and warrant further testing on a larger scale.

5. *Iron-containing water*

A number of the Department wells contain a high iron content. A successful and simple treatment by the addition of a silicate was found to overcome the appearance, staining and the palatability of the water in a well in the Cochrane District. This same treatment will be applied in other problem areas.

6. *Thorold Laboratory*

A temporary laboratory was established at Thorold to provide testing facilities for the large volume of construction in that area.

7. *Bentonite Slurry*

Laboratory model tests were designed to determine if the Bentonite Slurry could be pumped into the construction joints at the East Main Street tunnel under the Welland Canal to prevent leakage.

8. *Concrete Repair Material*

A laboratory evaluation of regulated set cement, anticipated to develop accelerated high early strength in concrete patching applications, is continuing. A field program to evaluate the effectiveness of the concrete repair materials used to date was initiated.

9. *Reflection cracking of pavements*

Various designs to prevent reflection cracking of bituminous pavement were prepared and will be tried on Highway 11 between South River and Trout Creek.

10. *Bituminous Stabilized Base*

The first bituminous stabilized sand mix with emulsion and cutback binders was laid on Highway 620 east of Apsley.

11. *Pavement edge cracking*

Detailed measurements were made along the edge of selected portions of a paved road in Huron County to determine the magnitude of edge heaving that contributes to the edge cracking problem.

12. *Seismic Surveys*

A detailed review of several years of seismic experience indicated that it would be desirable to show the overburden depths in tabular form.

13. *Bridge over the Chippawa Power Canal*

When the overburden over the rock was removed for the construction of the footings, wide vertical fissures were discovered. It was necessary to re-design the foundations by anchoring the foundations to the rock, using the prestressing techniques.

14. *Bridge Deck Waterproofing Performance*

56 bridge decks were investigated to determine the effectiveness of four types of waterproofing systems presently in use. It was evident that a completely effective system has not yet been developed and more work in this area must be undertaken.

15. *Stripping of asphalt mixes*

The Department has been using a sand asphalt mix over the granular base with the intention of preventing the stripping of asphalt cements from the aggregate by water. An interim investigation into the effectiveness of the sand asphalt mix for this purpose was completed.

16. *Vibratory Rollers*

Vibratory rollers are being used extensively for the compaction of earth and granular materials. An investigation of vibratory rollers for the compaction of hot mixes was undertaken and completed.

17. *Tensile splitting test*

A field evaluation of the tensile splitting test was completed. This test could be considered as an alternate test to the flexural test.

18. *Longitudinal and transverse cracking of bridge decks*

An extensive survey was made of the cracking on bridge decks in service, and assistance was provided to the Research Branch with the instrumentation and testing of the McCowan Road structure.

19. *Prolonged mixing of concrete*

A laboratory project was carried out to determine the effect of prolonged mixing and reworking on the strength of air entrained and non-air entrained concrete mixes.

SIGN AND BUILDING PERMITS SECTION

Building Permits issued during the year by this Section totalled 5,757 with a valuation of \$254,975,523; and 5,869 Field Advertising Sign permits were issued with a valuation of \$65,275. Other permits issued included 2,460 Entrance Permits and 998 Encroachment Permits; and 1,899 Sign Permits were issued and 5,235 were renewed.

ADMINISTRATION DIVISION

Responsibilities of the Assistant Deputy Minister (Administration) include the following Branches: Financial, Services, and Electronic Computing.

Financial Branch

The following statements outline the expenditure and cash receipts of Department of Highways, Ontario, for the year ending March 31, 1971. The "Expenditure Summary" (Statement II) sets out total ordinary expenditure and capital payments as \$497,291,104.

- I. Ordinary Expenditure
- II. Capital Payments, including Expenditure Summary
- III. Trans-Canada Highway
- IV. The "Queensway" — Ottawa
- V. Burlington Bay Skyway
- VI. Garden City Skyway
- VII. Comparison of Average Unit Prices Paid on Contracts

Pre-qualification of Contractors

During the year a total of 215 capital contracts was awarded, of which 162, representing 75.3% of the total or 98.8% of the tender value, required the pre-qualification of contractors.

Of the 143 ordinary contracts awarded, 77 or 53.8%, representing 86.3% of the tender value, required pre-qualification. An average of 4.2 bids was received on pre-qualification contracts, compared to 4.5 bids on unqualified contracts.

Tender and Material Price Indices on Road Construction

To illustrate trend of prices paid this year on road contracts and for materials in relation to previous years, the following charts show:

Tender Price Indices (Chart I)

Comparison of Tender and Material Price Indices (Chart II)

CHART I
TENDER PRICE INDICES

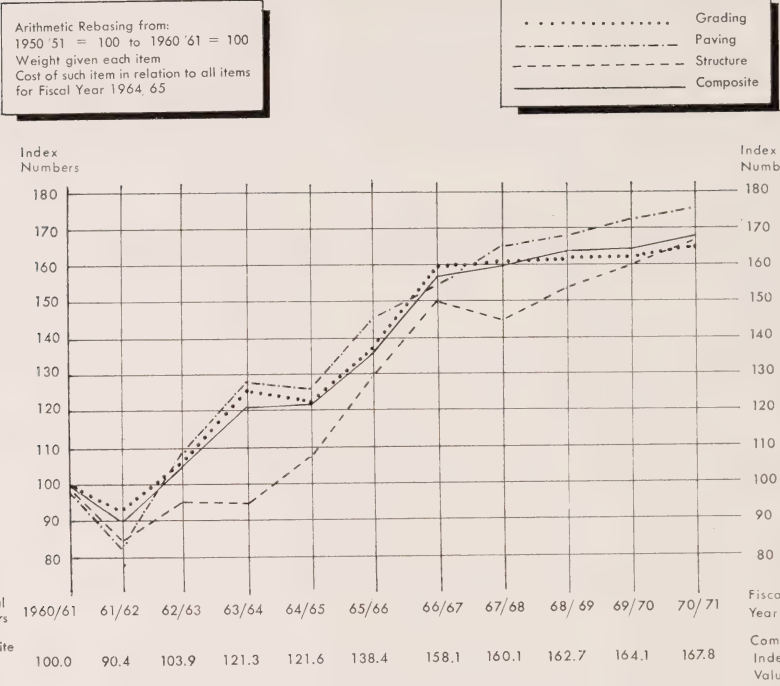
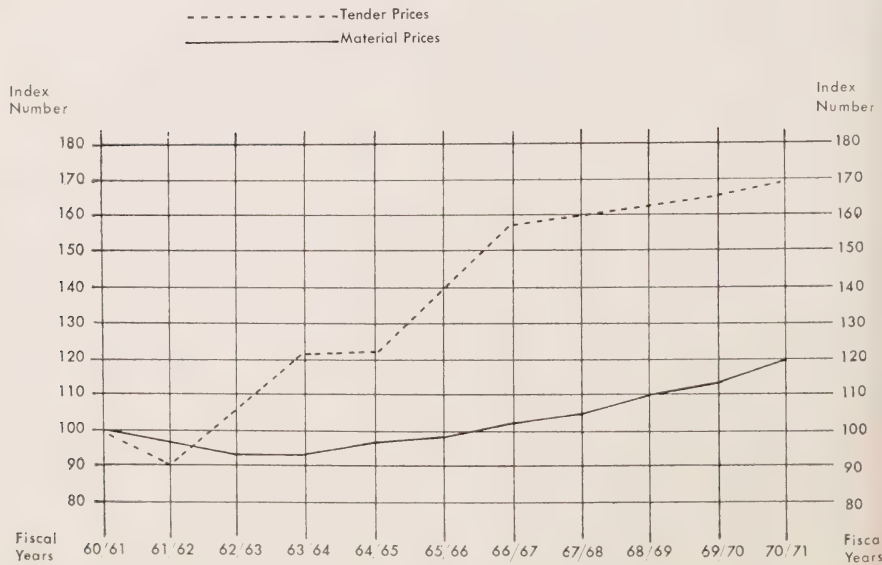


CHART II
COMPARISON OF TENDER AND MATERIAL PRICE INDICES



STATEMENT I

Ordinary Expenditure

For the Fiscal Years Ending March 31, 1971 and March 31, 1970

	Year ending March 31/71	Year ending March 31/70	
Maintenance of King's Highways and Secondary Highways—			
Winter Maintenance			
Contract and day labour	\$ 29,678,843	\$ 26,243,663	
Equipment Operating costs due to standby (60%)	(805,930)	(539,817)	
Summer Maintenance			
Patrol costs	17,065,867	16,280,305	
Gravel Crushing—contract and day labour	1,079,909	923,069	
Prime—Contract and day labour ..	926,901	810,777	
Hot Mix Patching—contract and day labour	1,344,128	1,572,763	
Surface Treatment—contract and day labour	448,734	308,946	
Mulch—day labour	264,371	246,497	
Major Bridge Repairs	864,530	691,817	
Equipment Operating costs due to standby (40%)	(537,286)	(359,879)	
Operation of Ferries	1,034,999	1,020,938	
Flood and other Emergencies	434,767	97,116	
District Office Overheads including En- gineering, Warehouse and Municipal Expenditures recovered but credited to Revenue	11,986,338	11,177,380	
Increase (Decrease) in inventories	436,955	401,601	
Reparing of present roads	815,767	(210,771)	\$ 58,664,405
Maintenance of Development roads	4,861,345	3,395,178	
Maintenance of roads in Unincorporated Townships in Northern Ontario	297,938	328,088	
Total (See Appendices 1 and 3 for dis- tribution of above expenditures by counties, roads, etc.)	1,429,209	1,330,773	
	\$ 71,627,385	\$ 63,718,444	
General Operating Expenditures—			
Purchase of trucks, tractors, graders, plows and other road equipment .	\$ 2,564,709	\$ 4,804,999	
Printing and stationery	1,231,380	1,120,764	
Office furniture and equipment	682,516	872,185	
Workmen's Compensation	412,200	364,841	
Insurance and claims	78,107	347,076	
Unemployment Insurance stamps	114,278	103,851	
Building repairs	194,784	420,609	
Maintenance of building and area office rentals	273,059	215,871	
Teletype rentals	81,782	80,805	
Staff training	40,265	35,071	
Recoverable expenditures (net)	121,143	(14,354)	
Central Stores increase (decrease) in stock	(134,108)	700,993	\$ 9,052,711
Head Office—			
General Administrative and operating staff salaries	8,322,510	7,171,580	
Travelling expenses	472,987	382,929	
Data Processing rentals	284,526		
Electronic Computing Branch salaries, expenses and equipment rentals ..	556,297	1,379,274	
Sundry	1,554,686	2,175,540	\$ 11,109,323
Road Publicity, etc.	157,726	105,919	
Burlington Bay Skyway toll collection costs	398,803	310,952	
Garden City Skyway toll collection costs	257,113	228,327	539,279
Municipal Subsidies—			
County Roads	\$ 8,349,160	\$ 8,785,995	
Township Roads	18,869,191	18,088,642	
Cities, Towns and Villages	35,392,418	25,850,378	\$ 52,725,015
Ontario Seasonal Employment Program	2,469,018	—	
Total Ordinary Expenditures	\$154,371,935	\$137,250,691	
	PER PUBLIC ACCOUNTS		
Total Ordinary Expenditures	\$154,371,935	\$137,250,691	

STATEMENT II

Capital Payments

For the Fiscal Years Ending March 31, 1971 and March 31, 1970

	Year ending March 31/71		Year ending March 31/70	
Construction of King's Highways and Secondary Highways—				
Payments to Contractors	\$108,335,723		\$106,246,278	
Materials and sundry contract expen- ditures	38,217,652		40,569,636	
Engineering	15,769,652	\$162,323,027	14,495,956	\$161,311,870
Construction of Development Roads ...		19,106,324		19,107,746
Construction of roads in Unincorporated Townships in Northern Ontario		936,775		924,994
Expenditures allocated to the above roads—				
Property		\$ 32,211,308		\$ 26,988,183
Total (See appendices 1 and 3 for distribution of above expenditures by counties, roads, etc.)		\$214,577,434		\$208,332,793
Expenditures of Head Office Branches unallocated and not included above:				
Accounting Regions	\$ 809,564		\$ —	
Right-of-Way Division	2,668,634		1,648,150	
Land Surveys	4,766,916		5,144,139	
Planning	6,207,679		5,506,355	
Design	11,688,807		9,740,354	
Program	743,356		521,708	
Buildings	1,790,037		1,486,092	
Soils, Materials and Testing	3,924,530		3,850,044	
Engineering Audit	1,222,419		1,092,664	
Increase (decrease) in Bailey Bridges and steel inventories	(79,918)		74,583	
Net recoverable expenditures debit (credit)	(4,777,613)		(4,955,852)	
Sundry	323,987	\$ 29,288,398	218,755	\$ 24,326,992
GO Transit				
Salaries	\$ 115,711		\$ 100,274	
Travelling	4,880		3,327	
Maintenance	305,835		281,287	
Railway operating				
Costs net	2,091,781		1,647,536	
Capital improvements	2,346,241	\$ 4,864,448	474,856	\$ 2,507,280
Municipal Subsidies:				
County Roads	\$ 20,887,766		\$ 21,515,264	
Township Roads	20,674,054		19,200,258	
Cities, Towns and Villages	59,191,622	100,753,442	47,072,832	87,788,354
Total Gross Capital Payments on Con- struction		\$349,483,722		\$322,955,419
Less recoveries:				
Trans-Canada Highway	\$ 5,193,341		\$ 4,665,189	
City of Ottawa	304,269		—	
Railway Bridges	1,066,943	6,564,553	893,413	5,558,602
Net Capital Payments per Public Ac- counts		\$342,919,169		\$317,396,817
EXPENDITURE SUMMARY				
Ordinary expenditures	\$154,371,935		\$137,250,691	
Capital payments, net	342,919,169		317,396,817	
		\$497,291,104		\$454,647,508

STATEMENT III

TRANS-CANADA HIGHWAY

The following statement sets out expenditures and amounts recoverable on the Trans-Canada Highway from the inception of the agreement with the Government of Canada on April 24, 1950.

	Refundable by Government of Canada	Expended by Department
Refunded by the Government of Canada on account of work performed prior to April 24, 1950	\$ 1,569,640	—
Year ending March 31, 1951	2,749,329	\$ 7,043,559
Year ending March 31, 1952	3,453,866	8,242,801
Year ending March 31, 1953	4,103,753	11,746,130
Year ending March 31, 1954	2,486,860	9,686,452
Year ending March 31, 1955	6,274,488	5,675,343
Year ending March 31, 1956	3,365,959	9,602,299
Year ending March 31, 1957	4,855,053	13,996,280
Year ending March 31, 1958	12,381,362	20,683,306
Year ending March 31, 1959	15,803,757	27,995,777
Year ending March 31, 1960	17,662,422	28,412,552
Year ending March 31, 1961	16,500,840	24,786,756
Year ending March 31, 1962	11,623,549	16,168,477
Year ending March 31, 1963	3,958,996	8,164,528
Year ending March 31, 1964	2,990,783	6,784,073
Year ending March 31, 1965	2,617,937	5,591,697
Year ending March 31, 1966	2,536,827	6,432,938
Year ending March 31, 1967	2,290,907	7,329,474
Year ending March 31, 1968	3,805,292	14,884,817
Year ending March 31, 1969	4,104,811	10,942,650
Year ending March 31, 1970	4,665,189	12,232,352
Year ending March 31, 1971	5,193,341	14,558,627
Expenditure by Department for property and other non- recoverable expenditures	—	17,962,816
Total to March 31, 1971	\$134,994,961	\$288,923,704
Less — Queensway paid as T.C.H. Funds		
Claim 26	\$26,777	
Claim 32	1,489	
Further claims submitted based on expenditures to March 31, 1971		\$ 28,266cr.
Claim 211	\$ 446,387	
Claim 212	94,377	
Claim 213	2,236,274	
	\$ 2,777,038	
Total Refunds by Government of Canada		\$137,743,733
Net Estimated cost to March 31, 1971		\$151,179,971

STATEMENT IV

THE QUEENSWAY—OTTAWA

The following statement sets out expenditures and amounts recoverable on the "Queensway" — Ottawa since the signing of the agreement with the Government of Canada, the Federal District Commission and the City of Ottawa, on March 19, 1957.

Expended by Department:

Year ending March 31, 1958	\$ 563,956
Year ending March 31, 1959	1,720,076
Year ending March 31, 1960	3,860,475
Year ending March 31, 1961	5,723,245
Year ending March 31, 1962	3,889,962
Year ending March 31, 1963	3,778,739
Year ending March 31, 1964	5,215,154
Year ending March 31, 1965	3,411,781
Year ending March 31, 1966	1,904,433
Year ending March 31, 1967	2,706,434
Year ending March 31, 1968	558,884
Year ending March 31, 1969	16,332
Year ending March 31, 1970	1,590
Year ending March 31, 1971	120,341

\$33,471,402

Recovered from Federal Government:

Year ending March 31, 1958	\$ 204,500
Year ending March 31, 1959	109,221
Year ending March 31, 1960	773,681
Year ending March 31, 1961	1,367,729
Year ending March 31, 1962	1,380,118
Year ending March 31, 1963	951,729
Year ending March 31, 1964	1,211,642
Year ending March 31, 1965	1,071,872
Year ending March 31, 1966	483,000
Year ending March 31, 1967	609,662
Year ending March 31, 1968	258,246
Year ending March 31, 1969	Nil
Year ending March 31, 1970	Nil
Year ending March 31, 1971	Nil

Total recovered from Federal Government \$8,421,400

Not considered as Queensway funds

Hurdman's Bridge	\$186,500cr.
Deleuw, Cathar report	18,000cr.
Report credit deducted by Federal	
QCI #38	6,615

Queensway claims paid by Federal as T.C.H. Funds

Claim 26	26,777
Claim 32	1,489

\$ 169,619cr.

Total recovered from Federal Government \$8,251,781

O/S Queensway claim #59-65 34,272

\$8,286,053

Recovered from the City of Ottawa 7,204,941

Amount recovered from Federal under T.C.H. contracts 1,244,707

Total recoveries \$16,735,701

Net estimated Cost to March 31, 1971 \$16,735,701

STATEMENT V

BURLINGTON BAY SKYWAY

Comparative Statements of Toll Collections, Revenues and Expenditures for the Fiscal Year ending March 31, 1971, and March 31, 1970

	Year Ending March 31, 1971	Year Ending March 31, 1970	Increase (Decrease)	Percentage
Revenues:				
Toll Revenue earned:				
Class I vehicles	\$ 886,807	\$ 858,495	\$ 28,312	3.30
Class II vehicles	101,096	96,451	4,645	4.82
Class III vehicles	219,720	214,359	5,361	2.50
Total Revenue Earned	\$ 1,207,623	\$ 1,169,305	\$ 38,318	3.28
Plus—Tickets and tokens sold but not presented and other net adjustments	37,787	41,732	(3,945)	(9.45)
Total Revenue	\$ 1,245,410	\$ 1,211,037	\$ 34,373	2.84
Direct Expenditures:				
Toll operating staff salaries ..	\$ 320,671	\$ 274,235	\$ 46,436	16.93
Travelling Expenses	816	789	27	3.42
Office Expenses	1,212	14,308	(13,096)	—
Light, heat, water, telephone, etc.	13,655	11,644	2,011	17.27
Maintenance of buildings	1,409	1,227	182	14.83
Maintenance of equipment	61,040	8,749	52,291	—
	\$ 398,803	\$ 310,952	\$ 87,851	28.25
Excess of Revenue over Expenditure	\$ 846,607	\$ 900,085	\$(53,478)	(5.94)
Traffic Volumes:				
Class I vehicles	10,783,441	10,423,246	360,195	3.46
Class II vehicles	613,526	594,127	19,399	3.27
Class III vehicles	1,279,161	1,268,762	10,399	0.82
Total	12,676,128	12,286,135	389,993	3.17

STATEMENT VI

GARDEN CITY SKYWAY

Comparative Statements of Toll Collections, Revenues and Expenditures for the Fiscal Year Ending March 31, 1971 and March 31, 1970

Revenues:				
Toll Revenue Earned:				
Class I vehicles	\$ 588,550	\$ 589,097	\$ (547)	(0.09)
Class II vehicles	52,052	49,246	2,806	5.70
Class III vehicles	93,255	89,839	3,416	3.80
Total Revenue Earned	\$ 733,857	\$ 728,182	\$ 5,675	0.78
Plus—Tickets and tokens sold but not presented and other net adjustments	3,937	(740)	4,677	—
Total Revenue	\$ 737,794	\$ 727,442	\$10,352	1.42
Direct Expenditures:				
Toll operating staff salaries ..	\$ 234,774	\$ 209,095	\$25,679	12.28
Travelling Expenses	762	766	(4)	—
Office Expenses, Tokens	3,034	3,015	19	0.63
Light, heat, water, telephone, etc.	9,891	9,021	870	9.64
Maintenance of buildings	2,379	1,407	972	69.08
Maintenance of equipment	6,273	5,023	1,250	24.89
	\$ 257,113	\$ 228,327	\$28,786	12.61
Excess of Revenue over Expenditure	\$ 480,681	\$ 499,115	\$(18,434)	(3.69)
Traffic Volumes:				
Class I vehicles	6,310,467	6,313,077	(2,610)	(0.04)
Class II vehicles	278,789	265,068	13,721	5.18
Class III vehicles	514,326	500,579	13,747	2.75
Total	7,103,582	7,078,724	24,858	0.35
Toll Rates:			Cash	Tokens
Class I, Passenger vehicles and trucks having not more than two axles and a weight-carrying capacity of less than one ton15	.05
Class II, Class I vehicles drawing a trailer, and trucks having not more than two axles and a weight-carrying capacity of one ton or more ..			.25	.10
Class III, Class II vehicles drawing a trailer; trucks having three or more axles, and public vehicles45	.15

STATEMENT VII

Department of Highways Ontario

Comparison of Unit Prices on Contracts for Use in Tender Price Index
For Period April 1, 1960 to March 31, 1971

Fiscal year	Clearing acre	Grubbing acre	Earth exca- vation cu. yd.	Earth exca- vation grading cu. yd.	Earth exca- vation borrow cu. yd.	Rock exca- vation cu. yd.	Gran- ular "A" ton	Gran- ular "B" ton	5/8" Crushed gravel ton	5/8" Crushed gravel ton	Sand cushion ton	Com- pac- tion equip- ment hour	Water for com- pac- tion m. gal.	Con- crete in cul- verts cu. yd.	Placing concrete pipe 12" lin. ft.
1960/61	162.63	207.19	.43	—	—	1.82	1.18	1.11	1.27	1.53	.68	6.65	3.75	24.62	—
1961/62	162.19	188.27	.36	—	—	1.77	1.21	1.08	1.13	1.07	.67	8.24	3.21	21.13	—
1962/63	201.68	197.17	.45	—	—	1.85	1.25	1.30	1.25	1.20	.69	9.50	3.25	25.79	—
1963/64	270.43	250.92	.47	—	—	2.22	1.49	1.54	1.36	1.41	.72	9.50	3.77	28.96	—
1964/65	285.29	299.10	—	.57	.61	2.45	1.39	1.19	1.48	1.48	.83	9.50	3.51	28.33	.98
R1965/66	353.87	343.89	—	.67	.70	2.59	1.66	1.39	1.24	1.13	1.04	10.85	4.21	40.30	1.69
1966/67	490.98	444.98	—	.76	.83	3.19	1.73	1.51	1.84	1.33	1.03	10.83	4.76	41.12	1.74
1967/68	519.22	481.98	—	.72	.87	3.09	1.75	1.32	1.69	1.57	1.09	12.12	4.91	44.32	1.85
1968/69	507.06	525.61	—	.67	.78	3.26	1.71	1.46	1.61	1.39	1.26	13.16	4.71	45.24	1.85
1969/70	466.23	505.72	—	.69	.81	3.13	1.70	1.62	1.55	1.51	1.14	13.50	4.55	43.78	—
1970/71	493.44	518.96	—	.73	.91	3.04	1.77	1.54	1.54	1.39	1.06	14.08	4.81	43.64	—

Fiscal year	Supply and place con- crete pipe 12" lin. ft.	Plac- ing C.S.P. 18" lin. ft.	Con- crete base sq. yd.	Con- crete pave- ment sq. yd.	Con- crete base and pave- ment sq. yd.	Bituminous top course ton	Bituminous hot mix base course ton	Structural steel fabrication ton	Structural steel erection ton	Structural steel supply and erection ton	Struc- tural steel delivery ton	Con- crete in struc- tures cu. yd.	Con- crete in struc- tures cu. yd.	Con- crete in found- ations cu. yd.
1960/61	—	—	—	—	—	3.93	3.37	277.75	75.32	—	—	32.66	—	—
1961/62	—	—	—	—	—	3.60	2.62	233.71	39.78	—	—	29.50	—	—
1962/63	—	—	—	—	—	4.40	3.52	267.18	58.48	—	—	31.34	—	—
1963/64	—	—	—	—	—	4.99	4.30	259.06	50.86	—	—	31.85	—	—
1964/65	—	.67	2.97	2.69	—	4.51	4.37	—	—	322.64	9.03	—	52.41	26.53
R1965/66	—	.83	3.38	3.26	—	4.88	5.02	—	—	405.63	4.48	—	61.32	33.35
1966/67	—	.99	3.83	3.33	—	5.69	5.48	—	—	498.53	10.12	—	67.55	35.03
1967/68	—	1.21	4.39	4.17	—	5.56	5.33	—	—	426.44	14.18	—	73.05	33.67
1968/69	—	1.43	4.51	5.50	—	5.49	5.06	—	—	459.43	14.31	—	75.32	36.54
1969/70	6.92	1.51	—	—	—	4.99	5.10	—	—	482.82	14.60	—	79.12	38.56
1970/71	6.38	1.63	—	—	—	5.05	5.36	—	—	501.66	15.01	—	84.58	35.97

R: Major revision — prices published are adjusted to maintain comparability.



Out with the old and in with the new — As demolition of old culverts gets under way on Highway 26 in the Owen Sound district (above), construction continues on a giant new culvert on Highway 7 in the Toronto district.



Services Branch

The Services Branch, through its various Sections, including those under the Right-of-Way Office, co-ordinates and expedites services for all other Branches of the Department, and in some cases acts on behalf of other Departments of the Ontario Government.

RIGHT-OF-WAY OFFICE

Sections administered by this Office include Land Surveys and Property.

LAND SURVEYS SECTION

This Section develops and formulates policies and procedures for legal land surveys, plan preparation and registration and associated functions affecting the surveying organization of the five Regional Offices forming an integral part of the Right-of-Way function.

In addition to preparing all recommendations for Orders-in-Council necessary for the designations, closings, reversions or transfers of highways, the Section, by review, maintains a uniform surveying and drafting operation in the Regions, develops and co-ordinates new electronic computing procedures, directs control surveys and provides professional and technical guidance to the Regional staff.

Through the Regional offices, registration was obtained for 2,866 plans in the proper registry and land title offices during the year. During the same period 420.21 miles of highway were designated as controlled-access highways, bringing the total of such highways to 2,582.03.

The Land Surveys Section conducted one training course, attended by 21 candidates, during the year. Land Surveys qualifying examinations for field and drafting staff were tried by 165 candidates, of whom 94 passed and 14 passed with supplementals.

The apprentice program for Ontario Land Surveyors continues, and during the year 14 passed the Final Part 1 examinations and three passed the Final Part 2 examinations.

Co-ordinate control surveys are continuing on sections of various highways throughout the province, and to date this Section has established approximately 3,200 miles of control surveys on the Ontario Co-ordinate System for Department use. In co-operation with Geodetic Surveys, Department of Energy, Mines and Resources, Ottawa, the existing net in the Windsor area was expanded easterly to Ridgeway, thus increasing the mileage of control surveys performed under the joint Federal-Provincial program to 1,174 miles.

Appendices to this report give details of controlled-access highway designations and assumptions, designations, reversions and transfers of sections of the King's Highway, Secondary highways and Tertiary road systems.

PROPERTY SECTION

The re-organization of the Property Section to effectively administer the policy and procedures of The Expropriations Act, 1968-69, and the acquisition of deed, has been in force for approximately two years.

Amicable settlement normally is reached with approximately 83 per cent of the owners contacted. Of the owners affected by expropriation, only 2.5 per cent proceed to arbitration before the Land Compensation Board.

A Hearing of Necessity may be requested by an owner to ensure that the taking is fair, sound and reasonably necessary. During this fiscal year, 136 owners requested a Hearing of Necessity. Fifteen Hearings have been held since April 1, 1970 and the Inquiry Officers have found in favour of the Department in each case. Seventy-four of the requests for Hearings were waived after further negotiations with the owners.

During the fiscal year, 693 properties were expropriated, 4,086 agreements were negotiated with property owners, and final compensation was paid in 3,666 cases. The total of agreements paid for normal highway projects was \$27,966,363.

Expenditures on the acquisition of property for Expressways in Kitchener-Waterloo, Ottawa, Guelph, Windsor, Brantford and Niagara Falls was \$4,221,648, increasing the overall expenditure to \$32,188,011.

The Property Section is continuing towards the goal of purchasing all requirements a year prior to the start of construction. At the close of the fiscal year, the Department was involved with 5,011 owners in the process of appraising, negotiating or conveyancing.

Seventeen applications were made to The Ontario Municipal Board during the year. Seventeen Hearings were held, four settlements were reached, and five awards were made by the Board. Revenue from the sale of surplus land during the year totalled \$1,124,429.14, and from leased property \$321,926.98.

Only five owners exercised their right of first refusal under Section 43 of The Expropriations Act, 1968-69, which permits the former owner to repurchase at the best price offered.

The Department of Highways has established a procedure to deal with owners of properties entitled to relocation assistance under Section 15 of the new Act.

SUPPLY SECTION

This Section handles the purchase and distribution of most construction and maintenance materials used by the Department. Goods valued at more than \$30-million are ordered annually by the Purchasing Group, with term supply contracts being widely used to cover many items in continuing use. Such contracts establish firm prices for a prescribed period, and delivery of goods is scheduled as required.

The Purchasing Group also buys motorized land vehicles for several other Departments of the Ontario Government.

Central Stores distributes a wide range of maintenance and construction materials to all Branches of the Department on a province-wide basis. This includes supply of complete Bailey bridges, about 200 of which are normally in service on detours, and during construction.

The Material Control unit of the Supply Section disposes of all used equipment and surplus materials. This includes used vehicles removed from service by some other Departments of the Ontario Government. Vehicles are normally sold at public auction, with materials being offered by invitation tender.

EQUIPMENT SECTION

The Equipment Section provides a complete service to the Department and to other Departments of the Ontario Government. All requests for additional or replacement equipment by DHO and other Departments are processed by this Section, which also inspects, receives and services the equipment and distributes it throughout the province.

The Section provides on-the-job mechanical training, instruction, technical guidance and advice at Department garages, and is also responsible for the mechanical fitness of a fleet of seven ferries which must meet or exceed "Steamship" regulations.

The Section has developed a high speed data processing system for fleet management and is responsible for fleet security, carrying out a physical inventory on a four-year basis. It also maintains and operates the tree-saving and well-testing equipment and pavement-lifting equipment.

Many pieces of equipment used by the Department, such as zone strippers, tunnel washers, and automatic sand spreader controls, cannot be purchased and are designed and fabricated by the Equipment Section. The Section is also responsible for the design, supervision of installation and operational procedures of ice disposal air-bubbling systems in the vicinity of ferry docks.

ARTS AND EXHIBITS SECTION

This Section was responsible during the year for the design, transportation and assembling of major exhibits for the Thunder Bay Exhibition, the General Canada Exhibition at Ottawa, and the Great Western Fair at London. Two portable exhibits were designed and constructed for showing at 15 county fairs throughout the province, and a futuristic display model and paintings were assembled for the World Highway Conference in Montreal.

Working from engineers' plans and specifications, the Section also designed various animated models and scale models in modes of transportation for exhibits and research in planning for the future. Another project was involvement in the design and construction of a 40-foot GO Station display in the Automotive Building at the Canadian National Exhibition.

Due to the formation of new Sections within the Department, the scope of the Graphic Art Group was increased significantly during the year by the demand for the application of art to the requirements of engineers, technicians, designers, researchers and economists.

PHOTOGRAPHY SECTION

This Section is responsible for all photographs and motion pictures taken for official and publicity purposes, and for processing film taken by field staff. Two thousand assignments were completed during the year. Other projects included filming a second information movie of tests conducted on skid resistance of various types of tires, and production of several hundred 35 mm colour slides for staff training purposes and for showing at conventions and conferences.

DOCUMENTS SECTION

This Section provides record management services for the Department, including establishment of filing systems, development and implementation of policy regarding periods of retention, uses of microfilm, and storage of records to meet information requirements. The Section is also responsible for library services and the distribution and sale of maps.

SPECIAL SERVICES SECTION

Special Services acts for the Department in liaison with the Department of Public Works in all matters pertaining to buildings, building sites, and office and shop accommodation. The Section is also responsible for all communications within the Department, such as telephone, teletype, radio and video tape facilities. Administration of Service Centres on controlled access highways is another responsibility.

Service Centres — Nineteen Service Centres had been established on the Macdonald-Cartier Freeway at the close of the year and the current Service Centre program for the Freeway has been concluded. The current program for Highway 400 has also been concluded and the four sites now operating on the four-lane section of this freeway appear to be adequate to handle traffic projected for the next few years.



One of 19 Service Centres on Highway 401, each of which has a million visitors annually, this location in the Port Hope district includes a gas station, parking, food and washroom facilities and borders a picnic area complete with tables and benches.

With an estimated one million travellers visiting each Service Centre annually, most lessees have found it necessary to carry out renovation and expansion programs, particularly with regard to washroom facilities, sewage disposal systems, parking areas and food dispensing facilities.

Nineteen picnic areas adjacent to existing Service Centres on the Macdonald-Cartier Freeway and Highway 400 were used extensively during the summer of 1970.

Completion of picnic areas at two new Service Centres near Mallorytown is scheduled for 1972, with the expectation that facilities will be available for the summer season. Approval has been received to extend the Service Centre program to new highways of freeway design and suitable sites are being selected.

TENDERS SECTION

Approximately 16,000 tenders were received and processed for 3,208 contracts and sales during the fiscal year by this Section, which processes all tenders on Engineering Projects, Supply Contracts, Obsolete Equipment and Material Sales, Well Drilling Contracts, Photography Contracts and Special Services Projects. More than 2,600 contractors and suppliers attended tender openings arranged by the Section during the year.

The Section issued orders for 3,421 advertisements in 1970-71 at a cost of \$128,000 to give notice of lettings of contracts, auction sales, expropriation proceedings, supply contracts, sales of obsolete equipment and material, and to advertise the requirements of Districts and Sections.



Public tenders opening of all major contracts awarded by the Department are held at Head Office, Downsview, every Wednesday throughout the year.

Electronic Computing Branch

The Electronic Computing Branch, officially recognized as the engineering and scientific computer installation for the Ontario Government, is responsible for providing programming, computer systems and data processing services to all Divisions, Offices and Sections of the Department, as well as to other Departments of the Ontario Government.

The activity of the Branch is divided into three Offices: Administrative, Development, and Operations.

DEVELOPMENT OFFICE

The Development Office is divided into four Sections — Technical Support, Engineering Systems, Management Science Systems and Macro Engineering Systems.

TECHNICAL SUPPORT SECTION

During the year this Section's prime duties were the development and implementation of system software and the maintenance of the current operating system. In May of 1970 the Branch acquired an additional 262,144 byte of core storage and additional Input/Output peripheral equipment. A revised version of the operating system was installed to correspond to the above core and peripheral acquisition. High speed terminals were introduced in the Southwestern Region and in order to provide this Remote Job Entry capability, the HASP system was incorporated as part of the operating software.

ENGINEERING SYSTEMS SECTION

This Section's responsibilities include design, development and maintenance of systems for various applications covering the entire spectrum of engineering activities within DHO. Work on either new systems or major improvements to existing systems was as follows:

Planning Branch

Origin Destination Data Processing System (5 programs)
Traffic Data Bank System (7 programs)
Public Transit Planning System (19 programs)
Road Transportation Planning System (32 programs)
Signal Optimization System, SIGOP (6 programs)
TORPS System (see below under other departments)
Traffic Volume Processing (7 programs)
Land Use Model

Design Branch

Road Design System: Restructuring of the system towards a more flexible, efficient design tool.

Additional features: Graphics, road reconstruction and resurfacing.

Expansion of the function of most Bridge Programs.

Continuous Plate Girders

Continuous Curved Bridges

Continuous Prestressed Bridges
Properties of Steel Box Girders

Highway Geometry System (BR470). This program is now used by Bridge, Design, Road Design and Construction crews.
Implementation of ICES-STRUDL (Structural Design Language)

Research Branch

Programming Assistance to several Research Projects (6 programs)

Operations Branch

Original Ground Data Reduction and Plotting
Slope Stability Analysis (Morgenstern Method)
ICES-SEPOL (Settlement Problem Oriented Language)
ICES-LEASE (Limited Equilibrium Analysis of Slope & Embankments)
Highway Geometry for Construction Layout (BR470)

Other Government Agencies

Tourism and Outdoor Recreation Study (TORPS). This is a co-operative project involving six Provincial Governments. ECB has been responsible for the development of all the Computer Programs necessary.

Metro Toronto Planning Board

Calculation of Labour Force, Employment, Population, etc. from Assessment Records. One of the functions of this Section has also been organizing User Seminars for the Introduction of New Systems. Such seminars have been conducted for Planning Branch: New Transportation Systems, Bridge Office: ICES-STRUDL, Foundation Section, ICES-SEPOL and London and Kingston Regions: ICES-COGO.

MACRO SYSTEMS ENGINEERING SECTION

This Section was established this year to deal with systems that are very broad in scope and serve more than one user. It provides for the co-ordination of the various information systems for the development of any integrated data bank to serve the Department.

MANAGEMENT SCIENCE SYSTEMS SECTION

This Section extends and upgrades the use of the computer as a tool for Management Information, Financial Accounting and Scientific Investigation. A step-wise approach to system design is employed for all system development work which covers feasibility studies, information-flow analysis, system module outline, detailed systems analysis, program design, programming and testing, system validation, user education, feedback analysis and evaluation. Powerful generalized tools and extended data base have produced the flexibility which enables the Section to develop applications for almost all Branches of the Department in Head Office and in the Regions and Districts, as well as for other Departments. This past year the development of new systems and the improvement of existing ones has progressed within three major development types:

- (1) Information Management
- (2) Scientific
- (3) Financial

These applications are developed for use by most of the Department's Branches, Regional and District offices, as well as for outside Departments. Application developments usually involve:

- (1) Feasibility Study
- (2) Information Flow Analysis

- (3) System Modular Outline
- (4) Detailed System Analysis
- (5) Program Design
- (6) Programming and Testing
- (7) System Testing
- (8) User Education
- (9) Analysis and Evaluation of User Feedback

New applications were developed and existing systems improved upon for the following:

Design Branch

Three Dimensional Analytical Triangulation
Digitized Magnetic Tape Translator

Financial Branch

Expenditure Detail System
Budget Office Reporting System
Cash Disbursement Account System
Unclassified Payroll System
Property and District Annual Reports
Municipal Index and Subsidies
Payments to Contractors
Sundry Owner-Operated Equipment
Annual Report Statistical System

Operations Branch

Concrete Quality Control
Accelerated Strength Tests
Information Retrieval
Winter Maintenance Optimization
Municipal Roads and Streets Statistics
Progress Payment Certificates
Implementation of Cost Data Submission from District Accounting
Offices for Maintenance Management and Equipment Systems
Maintenance Management and Resource Allocation System
Climatological Analysis
Municipal Roads Needs Study

Planning Branch

Accident Analysis and Retrieval System
Study of Project Control Requirements

Research Branch

Construction Analysis and Staff Evaluation

Services Branch

Equipment System
Office Services Inventory System
Land Surveys Analysis Package
DHO Telephone Directory
Directory of Contractors and Suppliers

Personnel Branch

Personnel System

Electronic Computing Branch

Simulation of Computer Job Throughout
ECB Information and Costing System
Application Implementation on Teleprocessing System

Engineering Division

Contract Bid Analysis
Skills Inventory System
Construction Program Integrated Statistical Files System
Management Information System (Pre-Engineering)
Critical Path Analysis System
Predicting Expenditures on Construction Projects
Standardization of Construction Item Code
Highway Inventory System

Department of Civil Service

Pay Research Data Analysis
Unclassified Payroll

Department of Agriculture

Winter Wheat Survey

Ontario Provincial Police

O.P.P. Statistical Report

Department of Energy and Resources Management

Ontario Well Data
Air Pollution Study

Department of Social and Family Services

Benefit Statistics

Department of Municipal Affairs

Planning Questionnaires



Something new was added to highway maintenance with the introduction of zone striping cone pick-up vehicles, one of which is seen operating on Highway 2 east of Belleville.

OPERATIONS OFFICE

The ECB Operations Office is responsible for the provision of computer, technical control, keypunching, storage and security of user data records on tape and card media, services through the Branch's Production Section, the scheduling of jobs to meet customer needs, and the monitor and audit of production systems.

Major applications in production for the fiscal year 1970-71:

Area of Application	No. of Requests	% E.C.B. Production Facilities
Financial Branch	1952	7.00
Services Branch		
R.O.W. Office	320	0.40
Office Services	361	1.39
Equipment Office	127	1.66
Surveys Office	444	0.65
Others	11	0.09
Totals	1263	4.19
Program Office	1275	4.67
Staff Development Section	2	0.12
Research Branch	39	0.19
Operations Branch		
District Offices	309	4.49
Materials & Testing Office	366	1.70
Municipal Roads Office	34	0.25
Maintenance Office	123	3.47
Others	24	0.12
Totals	856	10.03
Planning Branch		
Traffic & Planning	3032	30.81
Design Branch		
Bridge Design Office	3724	2.78
Road Design Office	322	5.11
Eng. Surveys Office	328	2.01
Photogrammetry	466	0.42
Other DHO Users	386	8.40
Totals	5226	18.72
Outside Departments and Authorities	1128	22.86
Consultants	202	1.41
Grand Totals	14975	100.00

A total of 3,913 hours was clocked during the year by the ECB computer for all production, an increase of 363 hours over the previous year.

Personnel Branch

The Personnel Branch administers recruitment and placement of staff, staff transfers and promotions, training, organization and classification, personnel records, staff establishment of branches, the departmental safety program and the Public Service Superannuation Act. It is the Branch responsible for the administration of the Public Service Act and Regulations within the Department.

The Branch published a personnel manual, supplied to the supervisor of each major unit of organization, containing information on both Department of Civil Service and Department of Highways procedures. An accompanying manual, also published by the Personnel Branch, contains all published class specifications utilized by the Department.

These publications are augmented as the need arises by circulars, published over the signature of the Deputy Minister, detailing such matters as new salary rates, changes in personnel procedure or policies and other matters of related supervisory and employee interest. These circulars are widely distributed to both major and minor organizational units for display on bulletin boards so that employees may be aware of all new developments as soon as possible.

All employee grievances made under the Public Service Grievance Procedure are reported by supervisors to the Personnel Branch to ensure that prompt action may be taken where necessary.

Should the grievance reach the stage of a hearing before the Public Service Grievance Board or before the Classification Rating Committee designated by the Chairman of the Civil Service Commission, the departmental viewpoint is presented by a member of the Personnel Branch staff.

RECRUITMENT SECTION

During the period under review Department staff recruitment was increased slightly over the previous year.

In total, 940 new employees were appointed to the Probationary Staff, with 440 processed by the Recruitment Office, Downsview, and 500 by District and Regional Offices. This compares with 407 in Downsview and 356 in District and Regional Offices last year.

Summer student employment during this fiscal year totalled 872, compared to 753 in 1969. Of this total 201 were Civil Engineering undergraduates, while 129 were C.A.A.T. undergraduates.

Recruitment of professional staff was carried out at eight Ontario Universities, where 143 prospective candidates were interviewed and 20 Civil Engineering graduates ultimately hired.

This Department retained 70 Community College graduates from primarily the Survey and Civil Technician and Technology disciplines during the period under review.

A total of 27 internal competitions was processed, as well as three interdepartmental competitions. In addition, 20 newspaper advertisements were prepared and submitted to the Department of Civil Service to attract staff.

Records Section

This Section has the responsibility for the documentation, recording and filing of all employee transactions, ensuring that prescribed procedures are followed in such transactions.

Long Term Income Protection came into being during this year, requiring an extra effort by Personnel Records. All applications for LTIP were received and checked by this Section, which also had the responsibility to file over 10,000 applications. At the end of the fiscal year the Department's work force was 12,314, distributed as follows:

	1970-71	1969-70	1968-69
Administration Division	285	256	275
Southwestern Region	355	—	—
Eastern Region	336	—	—
Northern Region	317	—	—
Northwestern Region	183	161	—
Electronic Computing Branch	125	114	123
Legal Branch	44	38	31
Research Branch	74	36	24
Personnel Branch	52	49	48
Financial Branch	328	287	297
Planning Branch	274	404	405
Services Branch	786	1,158	1,168
Design Branch	465	763	770
Operations Branch	8,690	8,416	8,544
Totals	12,314	11,682	11,685

TRAINING SECTION

This Section is responsible for establishing and administering a program of training to maintain and improve the efficiency of Department operations. Training courses were held at the Downsview Training Centre during the fall and winter months when reduced field activities enabled 1,506 candidates to attend the 66 courses offered. That was an increase of 275 candidates over the previous year and an increase of 15 in the number of courses offered.

The courses provided instruction in a wide variety of Department activities, including engineering surveying, land surveying, construction surveying, drafting, estimating, quality control and property appraisal. Of candidates writing examinations, 84 per cent were successful. In addition, 633 candidates wrote examinations to qualify for promotion to a variety of classifications, and 74 per cent were successful.

The Department conducted five two-week courses for 164 employees from municipalities throughout the province, four of them inspection courses, and the fifth a surveying course; and a one-day seminar on surface treatment was conducted for another 250 municipal employees.

Assistance was given to 198 employees, either financially or through granting of leaves-of-absence, to attend courses conducted by outside agencies. This type of training is approved when it is not feasible to provide the training by in-service means and it is considered essential or beneficial to Department operations that specific employees should acquire special skills or knowledge.

In all 8,321 employees participated in various training activities during the year.

SAFETY SECTION

The Safety Section, through the Director of Personnel, is responsible for provision of safety training and accident prevention material to Department employees.

The concept of assigning Safety Instruction Officers to the Regional responsibility was further developed. One man now resides in North Bay and handles the Northern Region. He has space in the Regional Office, but answers directly to the Safety

Supervisor at Head Office. This man is responsible for the complete safety program throughout the Region and the Districts within that Region. The Central, Southwestern and Eastern Regions are covered by Safety Instruction Officers working out of Head Office. The Northwestern Region is the only one to which a Safety Officer has now been assigned. Meetings have been limited to the two-hour type, except in special cases, such as the Fire Prevention Course or the Defensive Driving Course.

The number of motor vehicle accidents rose from 531 last period to 736. Of these, Department operators were found responsible for 204 and not responsible for 532. The largest increase involved snow plows striking abandoned vehicles covered with snow. Department vehicles travelled 1,176,216 miles more than in the previous year.

The Safety Liaison Committee has completed the first phase of its assignment, a review of the District Equipment Instructor position. The Committee's recommendations reflect an immediate need for upgrading the training methods for employees engaged in accident prevention instruction, a change in the reporting relationship, and the establishment of a regular program of training for employees in safety and equipment instruction positions.



There she blows! Workman in foreground scurries for cover as dynamite blast shatters rock obstruction near Highway 35 in the Huntsville district.

SPECIAL REPORTS

NORTHERN ONTARIO RESOURCES TRANSPORTATION COMMITTEE

Under the jurisdiction of the NORT Committee the following projects were completed during the fiscal year:

- Grading and gravelling Highway 800 to Armstrong-Hurkett road — 18.32 miles.
- Central Patricia northerly — grading approximately 18 miles from mile 84 to mile 102 and including two Bailey bridge structures over the Pipestone River.
- Central Patricia northerly — gravelling from mile 26 to mile 56.
- Balmertown northerly — grading, mile 17.03 to mile 34.5, and clearing to mile 46.

Under an agreement with Ontario-Minnesota Pulp & Paper Company, the Manitou concession access road from Highway 11 (approximately 17.5 miles east of Fort Frances) northerly, grading 8.5 miles.

Under an agreement with South Bay Mines Limited, gravelling and grading a multi-purpose road of 52.0 miles from Ear Falls to the mine site at Confederation Lake. Under agreement with Mattagami Lake Mines Limited, grading an access road from Highway 599 to Sturgeon Lake mine site, approximately 10 miles.

Miscellaneous contributions were made to Upper Beaver Mines Limited, Tribag Mining Company Limited, Kokotow Lumber Company Limited, Department of Lands and Forests, on multi-purpose roads for reconstruction and maintenance (Sioux Lookout-Valora Road, Cochrane easterly road, and McConnell Lake Road).

Miscellaneous pre-engineering was carried out on the Timmins to Smooth Rock Falls route, Ouimet Canyon road, and Moosonee southerly route.

The expenditures of the Committee for the year approximated \$4,000,000.

ENGINEERING AUDIT OFFICE

This Office is divided into two Sections: Field Audit, and Contract Checking.

FIELD AUDIT SECTION

This Section, working under the direction of the Field Audit Supervisor, consists of an estimating group at Head Office, Downsview, and field personnel in the five Regions.

Regional staff carry out routine spot checks in the Districts by field survey and examination of office records on Pre-Engineering Projects, Construction Contracts and Day Labour Projects of all Capital, Maintenance, Development Road and Connecting Link Contracts. Audits are also carried out as required on these various contracts with respect to claims, new tender items, and force accounts.

As part of the policy of keeping closer control of subsidized spending in the municipalities, audits were conducted on a variety of By-Law Subsidy Projects — audits intended primarily to determine the methods of control and supervision currently exercised by the municipalities and to recommend any necessary changes.

Responsibilities of the Head Office Estimating group include spot checking of various pre-engineering estimates to ensure they adhere to normal estimating procedures, and checking random final estimates which have been processed by the Contract Checking group at Head Office or by Regional office staff.

During the year, 385 field audits were carried out, 400 office audits, and 2,058 weighing audits.

CONTRACT CHECKING SECTION

The basic function of this Section is to approve final estimate pay quantities submitted for various types of contracts which have been audited in their progress stages in the Regions. A report outlining the condition of the final estimate and the final approved pay quantities is prepared on all the Capital Maintenance, Development Road, the majority of Connecting Link and some By-Law Contracts. These reports are forwarded to the various Districts for preparation of the final payment certificate.

A total of 334 contracts with a monetary value of \$110,089,726.71 was audited by the Contract Checking Section during the year.

PROGRAM OFFICE

The work accomplished in the fiscal year 1970-71 by the four Sections of this Office follows:

ADVANCE PROGRAM SECTION

During the year, 340 new work projects, with a total estimated value of \$56.0 million, were added to the Advance Construction Program. In addition, 27 projects were programmed for pre-engineering only.

In order to accommodate delays in pre-engineering and property acquisition, or as required to control expenditure, 40 projects to a total value of \$24.7 million and representing a total potential fiscal year expenditure of \$1.9 million were deleted from the program. Sixty projects to a total value of \$27.4 million and involving total expenditure of \$8.0 million in the fiscal year were added to the program. Each such addition to, or deletion from the current program would require adjustments to the five-year advance program, so that in the final analysis several hundred program revisions had to be made and documented.

In 1970, the Inventory Group began work on the new Photographic Inventory which will provide a visual record of roadway and environmental conditions on all sections of the Provincial Highway System. During the summer of 1970, photography was completed in Districts 1, 2, 3, 4, 6 and 7, and a start made in District 5. In all, 4,500 miles of road was photographed. Selected film was exhibited, with running commentary, to the concerned District and Regional Office. Copies of film were left in each office for future use as planning aids. The films were exhibited to various DHO groups to demonstrate the possibilities of the new system.

URBAN PROGRAM SECTION

This Section represents the Department in the planning design and implementation of Connecting Link projects undertaken by urban municipalities and subsidized by the Department under Section 22 of The Highway Improvement Act. During the 1970-71 fiscal year, 83 such projects were processed. The total value of work was \$21,171,000, of which the Department's share was \$12,645,000.

SCHEDULING SECTION

The Section is responsible for realistic pre-engineering schedules for future work projects, advertising and award schedules for the current construction program and critical path construction schedules. All such schedules are to a great extent inter-dependent in the control of progressive implementation of projects. The pre-engineering schedules have an important secondary function, which is to maintain a free and steady work flow in the various engineering offices.

In September, the Scheduling Co-ordinators, whose business it is to record the progress of pre-engineering, were transferred to their respective Regions for closer contact with pre-engineering operations. Each of the many above-mentioned changes in the current and advance programs necessitated a corresponding change in pre-engineering schedules, so that the Co-ordinators were kept busy conveying information between the Regional offices and the Scheduling Engineer, enabling the latter to revise the schedules realistically in every respect.

SPECIAL STUDIES SECTION

The Section made considerable further progress during the year in its comprehensive study of highway control of access in Ontario. The aspect of the problem particularly investigated during the year was misuse of freeway rights-of-way, especially by picnicking motorists who cause traffic friction and congestion by leaving and re-entering the travelled way haphazardly. Advertising signs in private and industrial properties adjacent to freeways were also noted as unwarranted distractions which prevent free and safe traffic flow. A great deal of photographic evidence was acquired and incorporated into the report material.

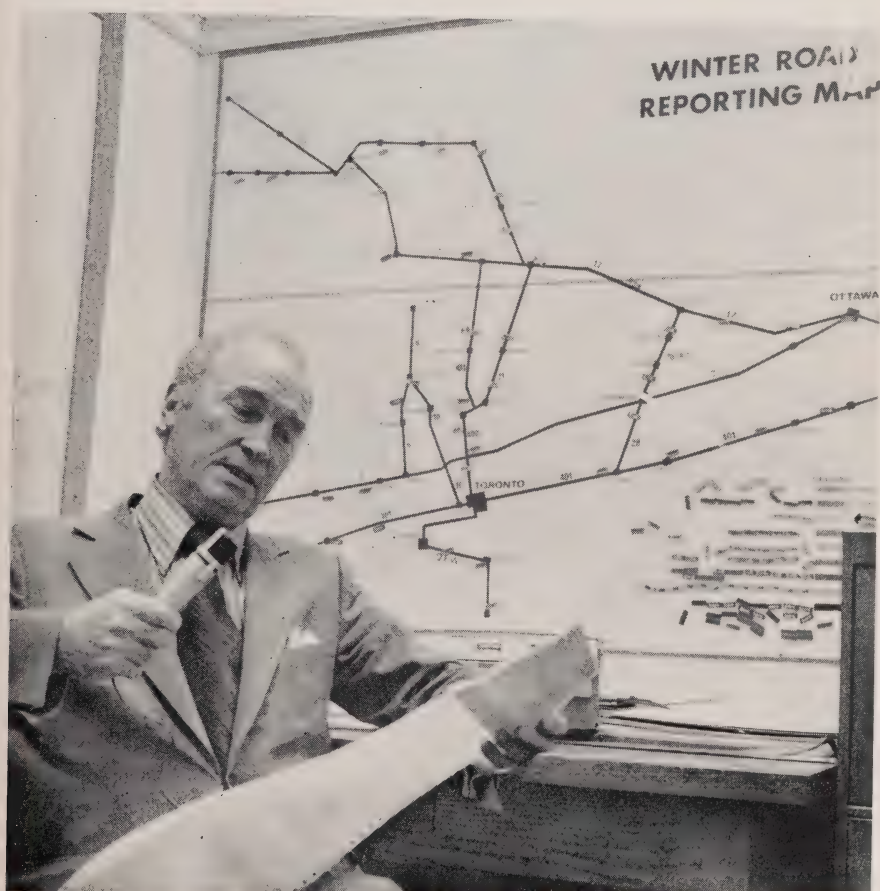
The Section also dealt with miscellaneous requests, from within and outside the Department, for analyses of statistical, economic and fiscal data pertaining to highways and other transportation modes. The Section also exchanged views on matters of mutual interest with academic and organizational researchers in Canada and abroad.



Department photographers cover all aspects of highway activity for distribution to the media and to preserve a pictorial record of projects past and present.

Information Services

Information Services is responsible for providing information to the public on Department activities, primarily through newspapers, radio and television. In performing this function, Information personnel prepare and distribute press releases and photographs, prepare feature articles on request for newspapers and the trade press, arrange for the publication and distribution of the official Ontario and Northern Ontario road maps, and assist in the preparation of material for exhibitions and fairs where the Department is represented.



Road reporting is a service provided by the Department during the winter months. Carried by radio stations throughout Ontario, the reports provide up-to-date information on road conditions to the concerned motorist.

One of the major public services is the provision of information by phone about road conditions across the province. This service operates on a 24-hour basis during the winter months and handles an average of 100,000 calls between November and April in addition to providing live broadcasts to radio stations.

Information Services also produces a variety of publications during the year, including the Annual Report, which is a detailed account of the Department's yearly activities; the Road Bulletin, which is published during the summer construction months and lists all construction areas on the province's highways; the DHO News, the monthly employee publication; and brochures of general interest covering various aspects of transportation.

Information Services maintains a Clipping Service from Ontario newspapers to provide a day-to-day account of transportation news coverage; co-ordinates material for speeches re Department activities, such as openings of highways and bridges; provides scripts for slide, television and motion picture presentation; answers thousands of letters, and mails several thousand pieces of literature annually; and provides photos to the media covering every aspect of highway operations, including construction and winter maintenance.



Drilling crew faces camera on Highway 599 about 150 miles south of Pickle Lake in the Thunder Bay district.



The terrain speaks for itself as rock cut and grading operations proceed on Highway 631 near White River in the Sault Ste. Marie district.

Construction by Highways 1970-71

*For total mileage
of individual highways
as of March 31, 1971
see Appendix No. 3*

HIGHWAY 2—WINDSOR TO QUEBEC BOUNDARY

Location	Type of Work	Miles or jobs completed this fiscal year
From Rochester Townline easterly	Resurfacing at various locations	7.8 (completed)
Waubuna Creek 7.2 miles W. of Hwy. 19 in Thamesford, including structure, 0.4m	Grading, culverts, granular base, pavement	Completed
Jct. Hwy. 2 and Hwy. 53 at Eastwood to Jct. Hwys. 2 and 24A	Resurfacing at various locations	2.34
Jct. Hwys. 2 and 24A at Cainsville to Hamilton west limits	As above	1.47
At Hwy. 2 Interchange with Q.E.W. in Burlington	Resurfacing	0.06
Twelve Mile Creek, Bronte and Oakville	Bridge approaches	Completed
CPR Overhead from Port Hope east limits easterly, 1.1m	Bridge and approaches	Completed
Hamlet of Westbrook	Grading, culverts, granular base, pavement	0.34 (completed)
Kingston to Napanee (various locations)	Resurfacing	16
From 0.2m W. of County Rd. 17 easterly	As above	4.42

HIGHWAY 3—WINDSOR TO FORT ERIE

Jct. E. C. Row Expressway and Douglas Ave., Windsor	Concrete	0.11 (completed)
Intersection of Hwys. 3 and 3B at Windsor south limits	Granular base, grading, culvert	0.29 (completed)
E. C. Row Expressway — from 0.26m E. of Hwy. 2, Howard Ave., Windsor	Pavement	0.48
From Stevenson Side Road westerly	Resurfacing	27.7
New Essex Diversion	Grading	9.82 (completed)
Essex Diversion	Pavement	2.28 (completed)
Esseltine Drain 0.31m E. of Hwys. 107 and 3	Pavement	0.10
0.31m E. of Hwy. 7 at Ruthven	Culvert replacement	Completed
From Eagle westerly to Kent County Line	Pavement	0.10
From Eagle westerly	Resurfacing	8.20 (completed)
0.2m E. of E. Jct. Hwys. 3 and 59 westerly to Courtland E. limits	Pavement	6.10 (completed)
From Nelles Corners to 4.3m W. of Port Colborne	Resurfacing at various locations	3.15 (completed)
6.7m W. of Fort Erie westerly	Granular base, pavement	Partially completed

HIGHWAY 4—PORT STANLEY TO FLESHERTON

Interchange improvement at Middlesex County Rd. 16	Granular base, grading, culverts	Completed
City of St. Thomas from Chesapeake and Ohio Rwy. grade crossing to New York Central trestle	Pavement	1.20 (completed)

Location	Type of Work	Miles or jobs completed this fiscal year
0.39m NW of Hwy. 7 intersection northwesterly 4.6m, including Little Ausable River structure	Granular base, grading, culverts, pavement	0.30
Little Ausable River structure 1/2m N. of Lucan Village limits	Bridge	Completed
Clinton southerly to Kippen, 3.24m	Pavement	Completed except for 6.02m of H.L.3 top course
Hanover to Walkerton	Granular base, pavement	4.98 (completed)
Flesherton to Priceville	Pavement	5.90 (completed)
Saugeen River structure in Priceville	Bridge	Completed
Priceville easterly	Granular base, grading, culverts	1.84 (completed)

HIGHWAY 5—TORONTO TO PARIS

N. Jct. Hwy. 5 to Jct. Hwys. 5 and 6	Resurfacing	1.65
Trafalgar Road to Appleby Line	Resurfacing (various locations)	0.6 (completed)
South Jct. Hwy. 5 to N. Jct. Hwy. 5	Granular base, grading, culverts, resurfacing	2.65 (completed)

HIGHWAY 6—PORT DOVER TO TOBERMORY

Lynn River structure in Port Dover	Bridge	Not completed
From Chippewa Creek Road to Caledonia	Resurfacing (various locations)	0.72
From Hamilton S. limits southerly	Grading, culverts, pavement	4.74
5.3m N. of Hwy. 5 to County Rd. 18 to Campbellville	Granular base, grading, culverts, pavement	5.3 (completed)
Intersection improvement at County Rd. 7 to Elora	Granular base, grading, culverts, pavement	0.61
From 0.4m south of County Rd. 34 northerly	Granular base, grading, culverts, pavement	0.98
Arthur northerly to 1.0m N. of Kenilworth	Granular base, grading, culverts, pavement	1.20 (completed)
From 6.4m N. of Wiarton northerly 4.9m	Bituminous surface treatment	4.9
From 11.3m N. of Wiarton northerly to 13.3m	Bituminous prime	2
Ferndale southerly	Granular base, grading, culverts	7.10 (completed)
Judges Creek structure, 4.0m S. of Ferndale	Bridge	Completed

HIGHWAY 7—SARNIA TO OTTAWA

W. Jct. Hwys. 7 and 21 westerly	Resurfacing (various locations)	16.9
From Hwy. 21 E. Jct. to Hwy. 21 W. Jct.	As above	

DEPARTMENT OF HIGHWAYS, ONTARIO

Location	Type of Work	Miles or jobs completed this fiscal year
New Hamburg Diversion intersection improvement	Granular base, grading, culverts	0.52 (completed)
Intersection 0.8m W. of Kitchener city limits	Granular base, grading, culverts, pavement	0.25 (completed)
0.4m E. of Georgetown N. limits westerly	Granular base, grading, culverts, pavement	6.9 (completed)
Humber River, Humber River West Branch	Bridge	Completed
(7A) From N. Jct. Hwy. 35 westerly	Pavement	6.6 (completed)
Marmora to Madoc Diversion	Granular base, grading, culverts, pavement	8.64 (completed)
From Madoc Diversion to 5.1m E. of Hwy. 37	Granular base, resurfacing	5
Hastings — Lennox & Addington Boundary to Actinolite	Resurfacing	2
From 7.0m E. of Hwy. 38 easterly	Grading, culverts, pavement	8.10
Jct. Hwy. 38 to 2.5m W. of Arden	Granular base, resurfacing (various locations)	17
From 0.6m W. of Ottawa west limits westerly	Grading, culverts, pavement	Partially completed
Kanata Road, from Hwy. 7 northerly 1.25m and 2.6m N. of Jct. Hwys. 7 and 17	Granular base	0.02

HIGHWAY 8—NIAGARA FALLS TO GODERICH

Old Hwy. 8 to 0.5m E. of town line	Resurfacing	1.65
Bullock's Corners to Peter's Corners	Bituminous surface treatment	8.9

HIGHWAY 9—KINCARDINE TO NEWMARKET

Maitland River 3.50m E. of Harriston	Bridge	Completed
From Hwy. 27, Schomberg easterly to Hwy. 400 including Holland Marsh Patrol Yard and three structures	Granular base, grading, culverts, pavement	.90
Schomberg Creek	Granular base, grading, culvert, pavement	8.76
Schomberg Creek	Bridge	Completed

HIGHWAY 10—PORT CREDIT TO OWEN SOUND

Victoria northerly, including Little Credit River Bridge, widening	Granular base, pavement	1.05
--	-------------------------	------

HIGHWAY 11—TORONTO TO RAINY RIVER

Richmond Hill to Aurora	Granular base, grading, culverts, pavement	3.59
Gravenhurst Bypass	As above	4.25 (completed)

Location	Type of Work	Miles or jobs completed this fiscal year
(Hwy. 11B) Hwy. 60 to N. Jct. of Hwy. 11	Resurfacing	2.98
Gull Lake, east structure	Bridge	Completed
Gull Lake, west structure	Bridge	Completed
S. Jct. of Hwy. 11B at Huntsville to Novar	Granular base, pavement	9.31
Magnetawan River Bridge at Katrine	Resurfacing	0.12
0.7m S. of Secondary Hwy. 654 northerly	Granular base, grading, culverts, resurfacing	4.16
North Bay Bypass	Grading, culverts, pavement	0.7 (completed)
10m N. of Timagami northerly	Granular base, grading, culverts, pavement	10.3
(Hwy. 11B) Town of New Liskeard	Pavement	0.25
From Latchford northerly	Granular base, resurfacing	3.75
S. Jct. Hwy. 569 southerly	Resurfacing	3.65
From S. Jct. Hwy. 11B northerly and from N. Jct. of Hwy. 569 southerly	Resurfacing	0.50
0.3m S. of Hwy. 112 northerly	Pavement	12.2
Cochrane to Driftwood	Granular base, pavement	11.7
Smooth Rock Falls to Strickland	As above	10.5 (completed)
Strickland to Fauquier	Granular base, grading, culverts, pavement	Completed
Shekah River to Fraser River	Granular base, pavement	Completed
Fraser River Bridge to Pawachuan River	Granular base	Completed
From 8.45m N. of Jct. of Hwy. 17 northerly	Granular base, grading, culverts, pavement	11
From 19.9m N. of Hwy. 17 easterly	Granular base, grading, culverts	2.5
Hwys. 11 and 17 easterly from Tertiary Road 800	Granular base, pavement	9.43 (completed)
Hwys. 11A and 17A, Jct. Hwy. 11 easterly	Bituminous surface	3.3
11A and 17A from 4.6m E. of Sistonen's Corners easterly	Granular base, pavement	5.80 (completed)

HIGHWAY 14—BLOOMFIELD TO MARMORA

Foxboro Diversion northerly	Granular base, grading, culverts	5.79
Stirling to Marmora	Resurfacing	14

HIGHWAY 15—BARRIEFIELD TO CARLETON PLACE

From 3.1m S. of Lombardy to Smiths Falls	Granular base, resurfacing	5.88
From 0.7m S. of Lombardy northerly	Granular base	0.25 (completed)

HIGHWAY 16—JOHNSTOWN TO OTTAWA

Location	Type of Work	Miles or jobs completed this fiscal year
From 3m N. of Beckett's Bridge northerly	Granular base, grading, culverts, pavement	Partially completed

HIGHWAY 17—QUEBEC BOUNDARY TO MANITOBA BOUNDARY

From 0.3m E. of Plantagenet east limits to Alfred west limits	Grading, culverts, resurfacing	Completed
From 0.1m E. of Montreal Road easterly to Rockland West entrance	As above	Partially completed
From 2.2m W. of Hwy. 7 westerly	Granular base, grading, culverts, pavement	2.22 (completed)
Intersection Hwys. 7 and 17	Grading, culverts	0.2
Intersection Hwy. 17 and Regional Road 9	As above	0.2
From 6.3m W. of Arnprior West westerly	Granular Base, grading, culverts, pavement	3.07
Muskat River 8m S. of Pembroke	Bridge, granular base, grading, culverts, pavement	Completed
Stonecliffe easterly	Granular base, grading, culverts	Partially completed
Bissett Creek easterly	As above	As above
Deux Rivières	Grading, culverts, pavement, CPR Overhead	Completed
1.6m W. of Mattawa west limits westerly	Granular base, grading, culverts, pavement	3.12 (completed)
0.3m W. of Mattawa east limits easterly	As above	Partially completed
1.6m W. of Mattawa west limits easterly	CPR Overhead	Completed
Mattawa northerly	Granular base, grading, culverts, pavement	5.49
Veuve River Bridge	Structure, granular base, grading, culverts, pavement	Completed
From Power Street, Copper Cliff, westerly	Granular base, grading, culverts	4.9 (completed)
From 0.3m W. of Jct. Hwys. 17 and 536 westerly	Granular base, resurfacing	17.5
(Old 17) Nairn easterly	Bituminous prime	10
(Old 17) Whitefish westerly	As above	.5
From 0.3m W. of Secondary Hwy. 536 westerly	Grading, culverts	17.5 (completed)
Jct. Hwys. 17 and 546 easterly 11.35m and northerly 0.42m	Pavement	11.7 (completed)
Sault Ste. Marie Diversion Hwy. 17E. Root River Bridge, Garden River Bridge and Echo Bay Bridge	Pavement	3.13 (completed)
Truck climbing lane Heyden Hill northerly and paving from 0.2m S. of Hwy. 556 northerly	Pavement	14.30 (completed)

Location	Type of Work	Miles or jobs completed this fiscal year
From Chippawa Falls southerly and northerly (various locations)	Granular base, grading, culverts, pavement	24.6 (completed)
Montreal River northerly to Speckle Trout Creek	As above	9.5 (completed)
Truck climbing lane from 12.1m S. of Hwy. 101 northerly	As above	2.99 (completed)
From 10m N. of Wawa northerly and from Wawa northerly to White River	Pavement (patching)	9.60
Walker Lake Road, Schreiber, easterly	Granular base, grading, culverts, pavement	3.55 (completed)
Nipigon easterly	Granular base, pavement	30.58 (completed)
From 1.0m E. of Upsala westerly	Resurfacing	8.91
From 9.1m W. of Borups Corners westerly	Granular base, grading, culverts	Partially completed
English River westerly	Resurfacing	25.4
From Oxdrift westerly	Granular base	13.6
Jct. with Hwy. 71 at Longbow Corners easterly	As above	29.4 (completed)
Dryden east limits easterly and Dryden west limits westerly	Granular base, pavement	16.4 (completed)
Cameron Bay Bridge	Structure, granular base	Completed
From Sixth Street, Keewatin, westerly	Granular base, pavement	9.56

HIGHWAY 18—LEAMINGTON TO WINDSOR

Amherstburg south limits	Underpass, granular base, grading, culverts, pavement	0.27 (completed)
Amherstburg north limits to Windsor south limits	Resurfacing	10.9

HIGHWAY 19—PORT BURWELL TO TRALEE

Mount Elgin to Ingersoll including Hwy. 401 interchange ramps	Granular base, pavement	6.50 (completed)
---	-------------------------	------------------

HIGHWAY 20—NIAGARA FALLS TO HAMILTON

From King Street, Stoney Creek to Haist Street, Fonthill	Resurfacing (various locations)	3.80
--	---------------------------------	------

HIGHWAY 21—MORPETH TO OWEN SOUND

From Morpeth northerly	Bituminous surface treatment	6.6
Dresden northerly	Resurfacing	17.3
Petrolia north limits	Granular base, grading, culverts, pavement	0.27 (completed)
Intersection 3.5m S. of Hwy. 82	As above	0.40 (completed)
Jct. of Port Frank's Road westerly	Resurfacing	4.1

Location	Type of Work	Miles or jobs completed this fiscal year
Clark Creek Bridge	Granular base, grading, culverts, pavement	0.42 (completed)
CNR crossing, 1.5m S. of Port Elgin	Grading, culverts	0.31

HIGHWAY 23—JCT. HIGHWAY 7 TO TEVIOTDALE

From Mitchell north limits northerly	Granular base, grading, culverts, pavement	9.02
--------------------------------------	--	------

HIGHWAY 24—PORT DOVER TO COLLINGWOOD

Hwy. 24 from 0.10m N. of Hwy. 3 northerly	Pavement	0.50
0.15m S. of Jct. Hwys. 24 and 53	Resurfacing	0.3
(24A) From Hwy. 53 to Hwy. 2, Paris	Bituminous prime	5.0
From Primrose westerly	Granular base, grading, culverts, pavement	2.64

HIGHWAY 25—OAKVILLE TO ACTON

From Jct. of Hwys. 24 and 25 southerly	Bituminous prime	5.50
--	------------------	------

HIGHWAY 26—BARRIE TO OWEN SOUND

Stayner to Collingwood	Granular base, grading, culverts, pavement (various locations)	8.02
Batteau River, 0.5m E. of Collingwood	Bridge	Completed
Thornbury to Meaford	Pavement	6.10

HIGHWAY 27—QUEEN ELIZABETH WAY TO PENETANGUISHENE

From N. of Bloor Street to just S. of Hwy. 401 interchange	Pavement	1.92
Bloor Street to S. of Hwy. 401 interchange	Granular base, grading, culverts, concrete base, asphalt, concrete	1.02

HIGHWAY 28—PORT HOPE TO BANCROFT

From Burleigh Falls to Lakefield	Paving (various locations)	11.70
Jct. Hwys. 504 and 28 northerly	Granular base, grading, culverts, pavement	9.10

HIGHWAY 31—MORRISBURG TO OTTAWA

From Hwy. 2, Morrisburg north limits	Resurfacing, crushed gravel and stone, grading, culverts	Completed
From N. Jct. of Hwy. 43 northerly to Ottawa-Carleton Regional Road 6	As above	Completed
From Ottawa-Carleton Regional Road 6 northerly	Resurfacing	11.20

HIGHWAY 33—KINGSTON TO STIRLING

Location	Type of Work	Miles or jobs completed this fiscal year
Trenton to Stirling	Resurfacing (various locations)	11
Trenton approaches to CNR subway	Granular base, grading, culverts, pavement	0.28 (completed)
From 0.6m E. of County Road 8A easterly	Granular base	0.52 (completed)
From 6m westerly to Glenora Ferry dock	Granular base, resurfacing	8.19

HIGHWAY 35—HIGHWAY 401 TO DWIGHT

From 3.7m N. of Norland northerly	Granular base, pavement	13.13 (completed)
From 8.01m N. of Norland northerly	Granular base, grading, culverts	4.50
From 5.2m S. of Dwight southerly	As above	3.71

HIGHWAY 36—HIGHWAY 7 TO BURLEIGH FALLS

From 0.7m S. of Bobcaygeon	Resurfacing	11.70
Bobcaygeon easterly	Granular base, resurfacing	2.30
8.6m E. of Bobcaygeon	As above	0.15
N. Jct. Hwy. 507 southerly	Bituminous surface treatment	4.62
N. Jct. Hwys. 507 and 36, Flynn's Corners to Buckhorn	Granular base, grading, culverts	Completed

HIGHWAY 37—BELLEVILLE TO ACTINOLITE

Belleville to Actinolite	Resurfacing (various locations)	26
Jct. of Old Hwy. 37 and Latta Sideroad	Granular base, pavement	0.13 (completed)

HIGHWAY 38—HIGHWAY 2 TO HIGHWAY 7

Jct. Hwy. 401 to Tichborne	Resurfacing (various locations)	109.4
From Hinchinbrooke northerly	Granular base, grading, culverts	2.51
From Hwy. 7 southerly	As above	1.55

HIGHWAY 40—HIGHWAY 3 TO HIGHWAY 402

Jct. Hwy. 80 to Sarnia City limits	Resurfacing	7.0
------------------------------------	-------------	-----

HIGHWAY 41—NAPANEE TO PEMBROKE

Napanee to Erinsville	Resurfacing (various locations)	17
From 7.2m S. of Cloyne southerly	Granular base, resurfacing (various locations)	7.50
1.8m N. of Cloyne northerly	Granular base, pavement	11 (completed)
From 8.2m N. of Cloyne northerly	Granular base, grading, culverts	4.62 (completed)

Location	Type of Work	Miles or jobs completed this fiscal year
From 13.7m N. of Cloyne northerly	Granular base, resurfacing (various locations)	0.35
From 0.5m N. of Jct. of Hwys. 132 and 41 southerly	Granular base, grading, culverts	4.62 (completed)
From Rankin northerly	Granular base, grading, culverts, pavement	8.64 (completed)

HIGHWAY 42—FORTHTON TO WESTPORT

From 5.8m W. of Athens	Granular base, pavement	Partially completed
------------------------	-------------------------	---------------------

HIGHWAY 43—ALEXANDRIA TO PERTH

From Kemptville westerly	Pavement	10.9
From S. Jct. Hwy. 31 easterly to Finch west limits	Resurfacing, crushed gravel and stone, grading, culverts	
From Hwy. 43 W. of Chesterville easterly	As above	
Village of Finch	Pavement	0.27 (completed)

HIGHWAY 47—HIGHWAY 401 TO HIGHWAY 46

Goodwood to Uxbridge west limits	Granular base, pavement	Completed
----------------------------------	-------------------------	-----------

HIGHWAY 49—PICTON TO HIGHWAY 46

From 0.4m N. of Quinte Skyway northerly	Resurfacing	0.02
---	-------------	------

HIGHWAY 50—HIGHWAY 27 TO HIGHWAY 9

Bolton to Hwy. 9, including intersection	Granular base, grading, culverts, pavement	Completed
Humber River overpass, Palgrave	Bridge	Completed

HIGHWAY 53—HIGHWAY 20 TO EASTWOOD

0.6m E. of Jct. Hwys. 2 and 53 Eastwood to Hamilton W. limits	Resurfacing	3.70
From Hamilton E. limits to 0.5m E. of Hwy. 56	Grading, culverts, resurfacing	2.50

HIGHWAY 54—CAYUGA TO CAINSVILLE

Cayuga Connecting Link to Caledonia Connecting Link	Bituminous surface	8.9
--	--------------------	-----

HIGHWAY 56—HIGHWAY 3 TO HIGHWAY 53

Jct. Hwys. 53 and 56 to Binbrook	Resurfacing (various locations)	0.41
----------------------------------	---------------------------------	------

HIGHWAY 58—PORT COLBORNE TO ST. CATHARINES

Location	Type of Work	Miles or jobs completed this fiscal year
Thorold Road northerly to Merritt Road	Granular base, grading, culverts, pavement	Completed

HIGHWAY 59—LONG POINT PARK TO SHAKESPEARE

From 1.5m N. of Walsingham	Granular base, grading, culverts	0.10
From S. limits of Norwich southerly	Bituminous surface treatment	6.40
From Norfolk County Secondary School entrance	Granular base, grading, culverts, pavement	0.24 (completed)

HIGHWAY 60—HIGHWAY 17 TO HIGHWAY 11B

Huntsville to Dwight, sections	Granular base, resurfacing	1.74
From Hwy. 127 easterly	Granular base, grading, culverts, pavement	11.1
Jct. Hwy. 127 westerly	Resurfacing	12

HIGHWAY 61—INTERNATIONAL BOUNDARY TO THUNDER BAY

From Jct. of Hwy. 130 easterly	Granular base, grading, culverts	Partially completed
--------------------------------	----------------------------------	---------------------

HIGHWAY 62—HIGHWAY 14 TO QUEBEC BOUNDARY

Foxboro to Madoc, various	Resurfacing	17
From 1.3m S. of Maynooth, southerly	Resurfacing	7.89
From 1.3m S. of Maynooth, southerly	Granular base	4.81
From Maple Leaf westerly	Granular base, grading, culverts, pavement	6.83

HIGHWAY 64—HIGHWAY 69 TO HIGHWAY 11

Noelville northerly 5.5m	Granular base, grading, culverts, bridge	Partially completed
Noelville easterly (various)	Bituminous prime on gravel road	8.3
Field to Marten River (various)	As above	15.6
4.4m N. of Field	Granular base	1.0

HIGHWAY 65—QUEBEC BOUNDARY TO MATACHEWAN

Kenabek to Leeville	Bituminous prime	8.40
From Kenabek easterly	Granular base, grading, culverts	7.25 (completed)

HIGHWAY 66—QUEBEC BOUNDARY TO HIGHWAY 65

Jct. Hwy. 65 easterly	Bituminous prime	14.0
-----------------------	------------------	------

Location	Type of Work	Miles or jobs completed this fiscal year
Crooked Creek, 5.2m W. of Jct. Hwy. 11	Bridge	Completed
5.2m W. of Jct. Hwy. 11	Granular base	0.50 (completed)
Chaput Hughes W. limits to Jct. Hwy. 11	Resurfacing	6.58

HIGHWAY 68—SOUTH BAYMOUTH TO HIGHWAY 17

(Old 68) Jct. Hwy. 68 through Village of Manitowaning	Bituminous prime	1.4
From 11.9m S. of Sheguiandah southerly	Granular base, grading, culverts	6.57 (completed)
From 0.3m S. of Sheguiandah southerly	As above	.29 (completed)
10m S. of Little Current southerly	Bituminous prime	12.5

HIGHWAY 69—HIGHWAY 12 TO CAPREOL

From 4.8m N. of Hwy. 11 northerly	Granular base, pavement	11.80
From 1.2m S. to 0.48m N. of Bala north limits	Granular base, grading, culverts, pavement	Completed
CPR and CNR overpasses Bala	Bridges	Completed
Jct. of Hwys. 637 and 69 southerly	Granular base, grading, culverts	Partially completed
From Dennis Street to Sellwood Ave. Capreol	Resurfacing	1.18
From 0.11m S. of Meehan Ave. to Capreol N. limits	Grading, culverts	1.18 (completed)
(Old 69) Pioneer Road	Bituminous prime	1.0

HIGHWAY 71—FORT FRANCES TO LONGBOW CORNERS

Nestor Falls northerly	Bituminous surface treatment, bituminous prime	9.30
From 8.9m N. of Nestor Falls northerly	Granular base, grading, culverts	8.30

HIGHWAY 72—DINORWIC TO SIOUX LOOKOUT

From Jct. with Hwy. 116 northerly	Granular base, grading, culverts	4.98 (completed)
-----------------------------------	----------------------------------	------------------

HIGHWAY 79—JUNCTION HIGHWAY 2 TO HIGHWAY 7

From Bothwell N. limits to Jct. of Hwys. 79 and 7	Resurfacing	24
---	-------------	----

HIGHWAY 80—HIGHWAY 2 TO HIGHWAY 40

Location	Type of Work	Miles or jobs completed this fiscal year
From Brigden westerly	Resurfacing	10.1
From Lambton-Middlesex County Line westerly	Resurfacing	1.10
From Hwy. 2 northerly	Granular base, grading, culverts, pavement	1.90

HIGHWAY 81—DELAWARE TO GRAND BEND

CPR overhead at Caradoc Station	Granular base, grading, culverts, pavement	1.03
---------------------------------	--	------

HIGHWAY 86—HIGHWAY 7 TO AMBERLEY

Town of Listowell connecting link	Granular base, grading, culverts	0.60
Cox Creek, 7.90m W. of Hwy. 27	Bridge	Completed

HIGHWAY 89—HIGHWAY 400 TO HIGHWAY 23

Jct. of Hwy. 87 southerly to Jct. Hwy. 23	Granular base, grading, culverts	1.46
Mount Forest west limits westerly	As above	5.95

HIGHWAY 95—HORNES POINT TO WOLFE ISLAND

Wolfe Island Village easterly	Bituminous surface	6.8
-------------------------------	--------------------	-----

HIGHWAY 96—QUEBEC HEAD TO WEST END OF WOLFE ISLAND

Wolfe Island Village easterly (various)	Bituminous prime	6.0
Wolfe Island Village easterly including Dawson Point Road	Bituminous surface treatment	6.8

HIGHWAY 97—FREELTON TO HICKSON

From Jct. Hwy. 59, Hickson to 1.4m S. of Plattsville	Bituminous surface treatment	11.0
--	------------------------------	------

HIGHWAY 101—QUEBEC BOUNDARY TO HIGHWAY 17

From 14.6m E. of north Jct. of Hwy. 129 easterly	Granular base, grading, culverts, pavement	13.7 (completed)
From 14.7m W. of Foleyet westerly	Granular base, grading, culverts	8.70
From 10.6m W. of Hwy. 576 westerly	Granular base, grading, culverts, pavement	9.41
32.3m E. of Matheson easterly	Granular base	2.0

HIGHWAY 115—HIGHWAY 401 TO HIGHWAY 28

From 7.5m W. of Hwy. 28 to Hwy. 35 and Pontypool Patrol Yard	Pavement	8.80 (completed)
--	----------	------------------

HIGHWAY 116—PATRICIA CORNERS TO HUDSON POST OFFICE

Location	Type of Work	Miles or jobs completed this fiscal year
From 3.2m W. of Jct. with Hwy. 72 westerly	Granular base, grading, culverts	7.52 (completed)

HIGHWAY 118—DORSET TO GLEN ORCHARD

From 0.9m W. of Port Carling westerly	Granular base, grading, culverts	2.16 (completed)
---------------------------------------	----------------------------------	------------------

HIGHWAY 119—HIGHWAY 17 TO RICHAN

From Jct. with Hwy. 17 northerly	Crushed gravel and stone (sections)	13.0
----------------------------------	-------------------------------------	------

HIGHWAY 121—HIGHWAY 35 TO HIGHWAY 28

From Hwy. 35 N.E.	Resurfacing	1.70
From 3.3m E. of Hwy. 519	Granular base, grading, culverts	0.9 (completed)
From centre Jct. of Hwy. 507 southerly	Bituminous surface treatment	4.62

HIGHWAY 124—PARRY SOUND TO SUNDRIDGE

From Hwy. 69 easterly	Bituminous prime	10.3
From 4.8m E. of Hwy. 69 easterly	Granular base, grading, culverts	0.50
From McKellar westerly	Bituminous surface treatment	1.0
From 2.3m W. of McKellar westerly	As above	1.6

HIGHWAY 128—KENORA TO REDDITT

From Kenora N. limits northerly	Granular base, pavement	0.48
From Kenora N. limits northerly	Bituminous surface treatment	4.0
From Jct. with Hwy. 659 northerly	Granular base (various sections)	8.4

HIGHWAY 129—THESSALON TO CHAPLEAU

From 17.1m N. of Hwy. 554 northerly (various)	Granular base, grading, culverts	13.7 (completed)
From 10.9m S. of south Jct. of Hwy. 101 southerly and from 4.5m S. of the Mississagi River Bridge northerly	Granular base, grading, culverts	11.99

HIGHWAY 140—HIGHWAY 3 TO EAST MAIN STREET WELLAND

From Townline Road northerly to East Main Street	Granular base, grading, culverts	Partially completed
Welland Canal Tunnel on East Main Street, Welland	As above	Partially completed

HIGHWAY 144—SUDBURY TO HIGHWAY 101

Location	Type of Work	Miles or jobs completed this fiscal year
From 0.5m W. of Cartier northerly	Bituminous prime	31.7
Moncrieff Creek	Bridge	Completed
From 24.1m N. of Benny northerly	Granular base, grading, culverts	8.62 (completed)
From 32.7m N. of Benny northerly	Grading, culverts, bituminous prime	18.47
From 42.5m N. of Benny northerly	Granular base, grading, culverts	8.86
From 51.4m N. of Benny northerly	Grading, culverts, bituminous prime	9.27
144 and 661, from 32m S. of Hwy. 101 southerly	Pavement	25.9
From Hwy. 101 southerly	Pavement	7.26

HIGHWAY 401 (MACDONALD-CARTIER FREEWAY)—WINDSOR TO QUEBEC BOUNDARY

Picnic areas at Service Centres W-7 and W-8 E. of Interchange 10	Granular base, grading culverts	0.65 (completed)
From Jct. Hwy. 6 to Jct. Hwy. 25 (various)	Resurfacing	0.80
From 0.8m E. of Campbellville Road Interchange easterly	Resurfacing	1.90
Morgan's Corners easterly to Morrish Road	Pavement	7.37
Etobicoke Creek to Hwy. 10	Granular base, grading, culverts, concrete base, pavement	4.08 (completed)
Hwy. 401 at Etobicoke Creek	Bridge	Partially completed
Hwy. 401 and Renforth Drive Interchange, Renforth Drive and Richview Sideroad Interchange	Grading, culverts, concrete base, asphalt top	1.83 (completed)
Renforth Drive, Etobicoke	Bridge	Partially completed
Hwys. 401 and 27 Interchange, including Hwy. 27 and Richview Sideroad Interchange	Granular base, concrete base, asphalt top, concrete	Completed
Richview Sideroad, Etobicoke	Seven bridges	Completed
Richview Sideroad, Mimico Creek	Two bridges	Partially completed
Richview Road, Richview Sideroad, Etobicoke	Bridge	Partially completed
Richview Expressway, Etobicoke	Bridge	Completed
Brown's Line southbound, Etobicoke	Two bridges	Completed
Hwy. 401 and Kennedy Road Interchange, including DHO Patrol Yard	Granular base, grading, culverts, pavement, concrete base	1.43 (completed)
Kennedy Road, Scarborough	Overpass	

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 401 and Kennedy Road Interchange	Granular base, concrete base, asphalt top, concrete	1.78 (completed)
Birchmount Road, Scarborough	Overpass	Completed
Midland Avenue, Scarborough	Bridge	Completed
Hwy. 401, Midland Ave. to Markham Rd.	Granular Base, concrete base, asphalt top, concrete	1.03
Hwy. 401 at McCowan Road	Grading, culverts	2.16
CNR, Scarborough	Overpass	Completed
From 5.1m E. of Hwy. 35 easterly	Pavement	7.37
From 6.2m E. of Moira River Bridge easterly	Granular base, resurfacing	5.78
Tyendinaga-Thurlow Boundary to Trenton (various)	Resurfacing	0.37
From 6m W. of Brockville westerly	Granular base, resurfacing	0.60
Brookdale Ave. Interchange 123 and CPR overhead 3.8m E. of Brookdale Ave., Cornwall	Grading, culverts, pavement	3.80

HIGHWAY 402—JUNCTION HIGHWAY 7 TO BLUEWATER BRIDGE

Indian Road Interchange, Sarnia	Granular base, grading, culverts, pavement	1.04 (completed)
---------------------------------	--	------------------

HIGHWAY 403—BURLINGTON TO BRANTFORD

Jct. Q.E.W. to Mohawk Road, Hwy. 2 Overpass (various)	Resurfacing	0.31
Brantford Bypass (various)	Resurfacing	0.38

HIGHWAY 406—HIGHWAYS 20 AND 58 TO QUEEN ELIZABETH WAY

Merritt Road northerly	Granular base, grading, culverts, bituminous pavement, concrete	0.96
CNR structure	Overpass	Completed
Beaverdams Road	Underpass	Completed

HIGHWAY 416—OTTAWA TO HIGHWAY 401 AT JOHNSTOWN

From 0.56m N. of Hwy. 401 northerly	Grading, culverts	5.81
From 5.9m N. of Hwy. 401 northerly	Granular base, pavement	3.59
South Nation River	Bridge	Completed
North end of Spencerville Diversion northerly	Grading, culverts	2.41
From 8.6m N. of Spencerville Diversion northerly	As above	2.56
CPR Overhead, .5m S. of Kemptville	Bridge	Partially completed

HIGHWAY 417—OTTAWA TO QUEBEC BOUNDARY

Location	Type of Work	Miles or jobs completed this fiscal year
From Quebec Boundary westerly	Granular base, grading, culverts	Partially completed
From 8th Line easterly to Vars sideroad	Granular base, grading, culverts	4.85 (completed)
Hwy. 417 and County Road 5 at Hwy. 417, 1.5m N. of County Road 3	Granular base, pavement	0.31 (completed)
Bear Brook, eastbound lane	Bridge	Completed
Bear Brook, westbound lane	Bridge	Partially completed
Seventh Line	Underpass	Partially completed
From Baseline Road easterly to 8th Line Road	Grading, culverts	4.05
Ramsay Creek, eastbound lane	Bridge	Partially completed
Intersection of Baseline Road and Russell Road easterly	Granular base, grading, culverts, pavement	As above

QUEEN ELIZABETH WAY—FORT ERIE TO TORONTO

Weigh Scale Ramp and Fleet Road 1.9m W. of Peace Bridge westerly	Granular base, grading, culverts, pavement	1.51 (completed)
From QEW to Chippawa Power Canal	Grading, culverts	0.72 (completed)
Intersection Hwy. 20	Two bridges	Partially completed
QEW and Hwy. 20 Interchange	Grading, culverts	0.45
From CNR at Bartlett Ave. Revision northerly	As above	0.35 (completed)
From Thompson Road at the QEW easterly	As above	1.58 (completed)
0.3m N. of Hwy. 20	Underpass	Completed
Fifteen Mile Creek, South Service Road	Bridge	Completed
Sixteen Mile Creek, N. and S. Service Roads	Underpasses	Completed
Eighteen Mile Creek, N. and S. Service Roads	Underpasses	Completed
North and South Service Roads from Jordan Station to Fifth Street	Granular base, grading, culverts, pavement	12.8 (completed)
North and South Service Roads from Jordan Station to 7th Street	Granular base	Partially completed
Winona Road	Underpass	Completed
Service Roads, Glovers Corners easterly	Pavement	6.44 (completed)
North and South Service Roads from Lincoln Ave. to Vineland Interchange	Granular base, grading, culverts, pavement	8.87 (completed)
Ontario Street, Beamsville	Underpass	Completed
Tufford Road, Clinton Township	Underpass	Completed
South end of Burlington Bay Skyway to Burlington Street Interchange	Resurfacing	2.20

Location	Type of Work	Miles or jobs completed this fiscal year
(Old QEW) Plains Road from 0.07m W. of Brant Street westerly	Grading, culverts, granular base, concrete base	0.7 (Partially completed)
1.4m N. of Interchange Hwy. 2	Resurfacing	0.2
Bronte Road Interchange westerly	Granular base, grading, culverts, concrete base, pavement, asphalt top	4.81 (completed)
7m W. of Hwy. 10 to intersection of Hwy. 122	Concrete base, pavement, asphalt top	3.38 (completed)
Kerr Street Bridge westerly	Granular base, grading, culverts, concrete base, pavement, asphalt	3.80 (completed)

KITCHENER-WATERLOO EXPRESSWAY—HIGHWAY 85 TO FISCHER DRIVE

From 0.6m W. of Fischer Drive to 0.35m W. of Homer Watson Blvd.	Granular base, grading, culverts, pavement	Partially completed
Fischer Drive	Underpass	Partially completed
Filsinger Road	Overpass	Partially completed
King Street N. and S.	Overpass	Completed
From N. of Bridgeport Road to King Street	Granular base, grading, culverts, pavement	Completed
Frederick Street, Kitchener to N. of Bridgeport Road	Granular base	Completed
Laurel Creek	Bridge	Completed
Laurel Creek-University Ave.	Bridge	
University Ave.	Underpass	Completed
Lexington Ave.	Underpass	Completed

E.C. ROW EXPRESSWAY

N. S-W Ramp, Jct. of E.C. Row and Dougall Avenue	Concrete pavement	0.11 (completed)
0.2m W. of Hwy. 3B easterly to 0.26m E. of Hwy. 2	Granular base, grading, culverts, pavement	0.48 (completed)

SECONDARY HIGHWAYS 500—BANCROFT TO DENBIGH

From Bancroft east limits easterly	Granular base, grading, culverts	5.89 (completed)
From 7.6m E. of McArthurs Mills easterly	As above	0.80 (completed)

501—PORT SEVERN TO HONEY HARBOUR

Jct. Hwy. 103 to Honey Harbour	Bituminous surface	8.2
--------------------------------	--------------------	-----

502—NAPANEE TO MARYSVILLE

Napanee westerly	Resurfacing	0.80
------------------	-------------	------

503—KIRKFIELD TO TORY HILL

Location	Type of Work	Miles or jobs completed this fiscal year
Jct. Hwys. 46 and 503 to Jct. Hwys. 503 and 505	Crushed gravel and stone	25.8

504—APSLEY TO GLEN ALDA

Hamlet of Apsley	Granular base, grading, culverts, pavement	0.13 (completed)
Apsley to Glen Alda	Bituminous surface treatment	16.0

505—JCT. HIGHWAY 46 TO SEC. HIGHWAY 503

Jct. Hwys. 46 and 505 to Jct. Hwys. 503 and 505	Crushed gravel and stone	11.8
---	--------------------------	------

507—HIGHWAY 28 TO HIGHWAY 503

0.6m S. of Hwy. 503 southerly	Bituminous surface treatment	2.0
2.0m S. of Hwy. 503 southerly	Granular base, grading, culverts	0.60 (completed)
7.0m S. of Hwy. 503 southerly	Bituminous surface treatment	
7.6m S. of Gooderham southerly	Crushed gravel and stone	1.03

509—CLARENDON TO SNOW ROAD

Hwy. 7 to Snow Road	Crushed gravel and stone	12.06
Clarendon to Snow Road	Bituminous surface treatment	6.0

512—HIGHWAYS 60 AND 62 TO EGANVILLE

Hurds Creek Culvert	Bridge	Completed
5.2m W. of Hwy. 41 westerly	Granular base, grading, culverts, crushed gravel and stone	0.61

514—HIGHWAY 35 TO INTERLAKEN

From Hwy. 60 to Interlaken	Bituminous prime	10.0
----------------------------	------------------	------

515—COMBERMERE TO FOYMOUNT

From 5.6m S. of Hwy. 62 southerly	Bituminous prime	2.84
From 2m W. of Quadeville westerly	Granular base, grading, culverts, crushed gravel and stone	1.0
From Jct. Hwy. 512 southerly	Bituminous surface treatment	11.0

516—PORT SYDNEY TO WINDERMERE

From Hwy. 11 to Hwy. 532	Granular base, crushed gravel and stone, pavement	5.01 (completed)
--------------------------	---	------------------

518—HIGHWAY 69 TO SAND LAKE

Location	Type of Work	Miles or jobs completed this fiscal year
From Hwy. 69 to Orrville	Bituminous surface treatment	1.6
From 7m E. of Hwy. 69 to Orrville (sections)	Bituminous prime	5.0
Bear Lake to Sprucedale (sections)	As above	7.0

520—ARDBEG TO BURKS FALLS

From Dunchurch to Ardbeg	Bituminous prime	16.15
1.8m E. of Ardbeg	Crushed gravel and stone, granular base, grading, culverts	1.0

522—TROUT CREEK TO ESS NARROWS

Loring westerly	Bituminous prime	13.7
From Arnstein easterly	Granular base	1.0 (completed)
Trout Creek to end of highway	Crushed gravel and stone	48.9

524—SEC. HIGHWAY 534 TO SEC. HIGHWAY 522

From Hwy. 522 to Hwy. 524	Bituminous prime	3.0
Farley's Corners to Jct. Hwy. 534	Crushed gravel and stone	

526—HIGHWAY 69 TO BRITT

Hwy. 69 to Britt	Bituminous prime	23
------------------	------------------	----

528—HIGHWAY 64 TO WOLSELEY BAY

From Hwy. 64 to Wolseley Bay	Crushed gravel and stone, bituminous prime	11.14
------------------------------	--	-------

529A—SEC. HIGHWAY 529 TO BAYFIELD WHARF

Hwy. 529 to Bayfield Wharf	Bituminous prime	3.0
----------------------------	------------------	-----

530—SEC. HIGHWAY 519 TO HIGHWAY 35

From Jct. with Hwy. 35 to Jct. with Hwy. 519 (sections)	Bituminous surface treatment	7.0
5m W. of New Guilford	Granular base, grading, culverts, crushed gravel and stone	1.5

531—HIGHWAY 17 TO BONFIELD

Jct. Hwy. 17 to Bonfield	Crushed gravel and stone	2.4
--------------------------	--------------------------	-----

532—HIGHWAY 11 TO HIGHWAY 69

At Hwy. 516	Granular base, crushed gravel and stone, pavement	0.70
-------------	---	------

533—MATTAWA TO HIGHWAY 63

Location	Type of Work	Miles or jobs completed this fiscal year
Mattawa to Jct. Hwy. 63	Crushed gravel and stone	32.2
Mattawa northerly	As above	5.49
12m N. of Mattawa northerly	Bituminous prime	13.7

534—POWASSAN TO RESTOULE

Powassan to Restoule	Crushed gravel and stone	21.9
Powassan westerly (various)	Bituminous prime	12.2

535—NOELVILLE TO RIVIERE VEUVE

Noelville to Riviere Veuve	Crushed gravel and stone	29.9
Noelville northerly (various)	Bituminous prime	9.3

537—HIGHWAY 69 TO WANNAPITAE

From Hwy. 17 east southerly	Bituminous prime	1.0
-----------------------------	------------------	-----

539—WARREN TO FIELD

Warren to Field (various)	Crushed gravel, bituminous prime	Completed
0.3m N. of Hwy. 17 northerly	Grading, culvert	1.18 (completed)
2.4m N. of Hwy. 17	Bridge	Completed
(539A) From Jct. Hwy. 539 northerly	Bituminous prime	0.8

540—LITTLE CURRENT TO MELDRUM BAY

26m W. of Jct. of Hwy. 542 westerly	Bituminous prime	1.0
From 23.4m to 3.01m W. of Jct. of Hwys. 540 and 542 excluding 2m previously completed	Granular base	4.70 (completed)
From 0.3m S. of Jct. of Hwy. 540 and Bidwell Road northerly	Grading, culverts	.30
23.2m W. of Jct. of Hwy. 542 easterly	Bituminous prime	18.2
(540A) From Hwy. 540 westerly	As above	2.5
(540B) From Hwy. 540 northerly	As above	1.2
4.1m and .9m W. of Jct. of Hwy. 542 easterly	As above	4.1
18m W. of Jct. of Hwy. 551 westerly	As above	1.0
2.0m and 3.15m E. of Jct. of Hwy. 551	As above	1.5
From 23.4m W. of Hwy. 542 westerly	Grading, culverts	5.60
Bridal Veil Falls	Granular base	.5 (completed)

542—HIGHWAY 68 TO JCT. SEC. HIGHWAY 540

From 2.5m W. of Hwy. 551 westerly	Grading, culverts	1.20 (completed)
-----------------------------------	-------------------	------------------

Location	Type of Work	Miles or jobs completed this fiscal year
(542A) Jct. Hwy. 542 to Tehkummah	Bituminous prime	1.5
From Jct. Hwy. 68 to Mindemoya westerly	As above	17.0

546—IRON BRIDGE TO MOUNT LAKE

From Hwy. 554 northerly	Bituminous prime, Bit. surface treatment	1.4
Hwy. 554 northerly and Hwy. 554 from Jct. of Hwy. 546 westerly (various)	Crushed gravel and stone	3.40

548—ST. JOSEPH ISLAND

From 2.3m E. of Richards Landing easterly	Bituminous surface treatment	1.50
From 4.4m S. of Richards Landing southerly	Crushed gravel and stone	4.0
From 4.4m W. of Richards Landing westerly	Granular base, grading, culverts	2.0 (completed)
From 6.4m S. of Richards Landing southerly	As above	2.0 (completed)

549—LAKE PANACHE TO HIGHWAY 17

Hwy. 17 to Lake Panache	Bituminous prime	8.4
From 3.4m S. of Jct. of Hwys. 17 and 549 southerly	Grading, culverts	.40 (completed)

551—PUBLIC WHARF TO EXCELSIOR

Jct. Hwy. 540 to Jct. Hwy. 540, W. Jct. Hwy. 542 to Providence Bay Dock	Bituminous prime	1.7
---	------------------	-----

554—HIGHWAY 129 TO SEC. HIGHWAY 546

From Hwy. 546 westerly 1m and from 2.6m W. of Hwy. 546 westerly 1m	Bituminous prime, Bit. surface treatment	2.0
From 1.0m W. of Hwy. 546 westerly	Crushed gravel and stone, grading, culverts, granular base	1.60

552—SEC. HIGHWAY 556 TO TWP. ROAD

From 1.0m E. of Hwy. 17 to 5.0m W. of Hwy. 17 (various)	Bituminous surface treatment	1.40
---	------------------------------	------

556—HEYDEN TO CHRISTINA MINE ROAD

From 12.3m E. of Hwy. 552 easterly	Granular base, grading, culverts	0.23 (completed)
From Searchmont northerly	Crushed gravel and stone	1.70

558—HAILEYBURY TO MONTREAL RIVER

Location	Type of Work	Miles or jobs completed this fiscal year
Haileybury to Montreal River	Crushed gravel and stone	16.6

560—ENGLEHART TO GOGAMA

Englehart to Jct. Hwy. 144 (various)	Crushed gravel and stone	121.4
From 5.5m W. of Elk Lake westerly	As above	2.20
6m W. of Elk Lake westerly	Bituminous prime	2.55
(560A) Jct. 560 to Westree	Crushed gravel and stone	6.2

561—BRUCE MINES TO HIGHWAY 638

From 3.3m N. of Bruce Mines northerly	Bituminous prime, Bit. surface treatment	3.0
---------------------------------------	---	-----

562—HIGHWAY 11 TO HIGHWAY 65

Jct. Hwy. 11 to Jct. Hwy. 65 (various)	Crushed stone and gravel	9.0
Village of Thornloe	Granular base	0.5
Jct. Hwy. 65 to O.N.R. Crossing at Thornloe	Bituminous surface treatment	5.2

564—HIGHWAY 112 TO END OF HIGHWAY

Hwy. 112 to end of highway	Crushed gravel and stone	6.6
----------------------------	--------------------------	-----

566—MATACHEWAN TO END OF HIGHWAY

Matachewan to end of highway	Crushed gravel and stone	16.4
------------------------------	--------------------------	------

567—NORTH COBALT TO SILVER CENTRE

North Cobalt to south end of Maiden Lake	Crushed gravel and stone	20.1
--	--------------------------	------

568—HIGHWAY 11 TO KENOGAMI

Hwy. 11 to Kenogami	Crushed stone and gravel	1.0
---------------------	--------------------------	-----

569—HIGHWAY 11 TO HIGHWAY 11

Jct. Hwy. 11 to Jct. Hwy. 11 (various)	Crushed gravel and stone	17.5
From S. Jct. Hwy. 11 northerly	Bituminous surface treatment	16.8

570—JCT. HIGHWAY 11 TO SESEKINIKA

Jct. Hwy. 11 to Sesekinika	Crushed gravel and stone	1.9
----------------------------	--------------------------	-----

571—SEC. HIGHWAY 562 TO HIGHWAY 11

Jct. Hwy. 562 to Hwy. 11	Bituminous surface treatment	4.2
Jct. Hwy. 11 to Jct. Hwy. 562	Crushed gravel and stone	3.6

572—HIGHWAY 11 TO HIGHWAY 101

Location	Type of Work	Miles or jobs completed this fiscal year
Jct. Hwy. 11 to Jct. Hwy. 101	Crushed gravel and stone	10.3
Jct. Hwy. 11 to Holtyre	Bituminous surface treatment	5.1

573—SEC. HIGHWAY 560 TO HIGHWAYS 11 AND 112

Charlton to Jct. Hwy. 11	Crushed gravel and stone	12.0
--------------------------	--------------------------	------

574—NOREMBEGA TO COCHRANE

Brower to Norembega	Bituminous prime Bit. surface treatment	7.0
---------------------	--	-----

577—SHILLINGTON TO HIGHWAY 67

From 1.5m S. of Jct. of Hwys. 11 and 577 southerly	Granular base	1.50
Ansonville to Monteith to Shillington	Crushed gravel and stone	16

578—IROQUOIS FALLS TO HIGHWAY 11

Hwy. 11 easterly	Crushed gravel and stone, grading, culverts, granular base	4.50
------------------	---	------

579—COCHRANE TO GARDINER

Cochrane northerly	Bituminous prime Bit. surface treatment	10.6
Cochrane to Gardiner	Crushed gravel and stone	22

583—MEAD TO LAC STE. THERESE

Hearst southerly	Bituminous surface treatment	4.0
Hearst to Mead	Crushed gravel and stone	23
From 4m S. of Hearst to 8m south	Granular base	Completed

584—HARDROCK MINES TO NAKINA

From Jct. Hwy. 11 northerly	Crushed gravel and stone, grading, culverts, granular base	Partially completed
-----------------------------	---	---------------------

585—NIPIGON TO PINE PORTAGE

Jct. Hwy. 17 to Pine Portage	Bituminous prime	22.9
------------------------------	------------------	------

587—HIGHWAYS 11 AND 17 TO SILVER ISLET

From south end of Hwy. to Jct. of Hwy. 17	Bituminous prime	26
Hwy. 17 to Silver Islet	Crushed gravel and stone	18

588—STANLEY TO ROUND LAKE ROAD

Location	Type of Work	Miles or jobs completed this fiscal year
From 2m E. of Jct. of Hwy. 590 to 4m W. of Jct. of Hwy. 593	Bituminous prime	10.4
From 0.5m W. of Jct. of Hwy. 595 to Jct. of Hwy. 595	As above	0.5
From Remick's Road to end of highway	As above	3.3
Kaministiquia River structures, north and south	Bridges	Partially completed
Nolalu to Round Lake Road	Crushed stone and gravel	18

589—HIGHWAYS 11A AND 17A TO END OF HIGHWAY

Jct. Hwys. 11A and 17A northerly	Granular base, grading, culverts	7.06
Hwy. 17A to end of highway	Crushed stone and gravel	19
Jct. of Hwy. 591 northerly	Bituminous surface	5.0

590—HIGHWAY 130 TO SEC. HIGHWAY 588

From Jct. Hwy. 588 northerly	Bituminous prime	1.4
------------------------------	------------------	-----

591—HIGHWAY 689 TO END OF HIGHWAY

Jct. of Hwy. 589 westerly	Bituminous surface	4.9
---------------------------	--------------------	-----

593—HIGHWAY 61 TO SILVER MOUNTAIN

Jct. Hwy. 588 to Hwy. 61	Crushed stone and gravel	
--------------------------	--------------------------	--

594—DRYDEN TO HIGHWAY 17

Eagle River southerly	Bituminous surface	6.60
Beaver Creek	Bridge	Completed
From Jct. with Hwy. 17 easterly to Dryden (sections)	Crushed gravel and stone	21.5

595—SEC. HIGHWAY 597 TO SEC. HIGHWAY 599

From 5m S. of Jct. Hwy. 608 to 2m N. of Jct. of Hwy. 588	Bituminous prime	6.0
Jct. Hwy. 590 to Jct. Hwy. 597	Crushed gravel and stone	25

596—KENORA TO MINAKI

Keewatin NE limits northwesterly	Crushed stone and gravel	29.6
From Muriel Lake Road northwesterly	Bituminous surface	22.0

598—SEC. HIGHWAY 604 TO HIGHWAY 128

Jct. of Hwy. 604 westerly to Jct. with Highway 128	Crushed gravel and stone, granular base, pavement	2.72
Jct. Hwy. 128 easterly	As above	2.80

599—HIGHWAY 17 TO HIGHWAY 646

Location	Type of Work	Miles or jobs completed this fiscal year
Ignace to Pickle Crow northerly	Crushed gravel and stone grading, culverts	183
English River to 0.2m N. of Valora CNR Crossing	Bituminous surface	13.5
From Sec. Hwy. 646 southerly	Crushed gravel and stone grading, culverts	7.0
From 7m S. of Jct. of Hwy. 646 southerly	Granular base, grading, culverts	8.60 (completed)

600—HIGHWAY 71 TO RAINY RIVER

From Rainy River northerly	Bituminous prime	3.60
From Rainy River N. and E. to Jct. with Hwy. 71 (sections)	Crushed gravel and stone	59

601—HIGHWAY 17 TO DRYDEN

From Jct. with Hwy. 17 west of Dryden N.E. and S. of Jct. with Hwy. 17 E. of Dryden	Bituminous prime, Bituminous surface treatment, crushed gravel and stone, granular base	Partially completed
---	---	---------------------

602—FORT FRANCES TO EMO

From W. limits of Fort Frances westerly	Crushed gravel and stone	30.8
From Emo southerly	Bituminous prime, Bituminous surface	1.0

603—HIGHWAY 17 TO DYMENT

From Jct. with Hwy. 17 northerly	Crushed gravel and stone, Bituminous surface	2.8
----------------------------------	--	-----

604—KENORA TO KENORA AIRPORT

Kenora northeasterly to airport	Crushed gravel and stone	5.20
---------------------------------	--------------------------	------

605—HIGHWAY 17 TO END OF HIGHWAY

From Jct. Hwy. 17 northerly	Crushed gravel and stone	7.7
-----------------------------	--------------------------	-----

607 AND 607A—HIGHWAY 64 TO HIGHWAY 69

1m S. of Hwy. 64 to Hwy. 69	Bituminous prime	6.3
French River to Jct. Hwy. 69	Crushed gravel and stone	7.4

608—HIGHWAY 61 TO SEC. HIGHWAY 595

Jct. of Hwy. 61 to Jct. of Hwy. 597	Bituminous surface	5.3
-------------------------------------	--------------------	-----

609—HIGHWAY 105 TO END OF HIGHWAY

From Jct with Hwy. 105 northerly	Crushed gravel and stone	9.8
----------------------------------	--------------------------	-----

611—SEC. HIGHWAY 602 TO END OF HIGHWAY

Location	Type of Work	Miles or jobs completed this fiscal year
From Jct. with Hwy. 602 northerly	Crushed gravel and stone	12.5

613—BIG FORK TO END OF HIGHWAY

From Jct. with Hwy. 602 northerly	Crushed gravel and stone	25.5
From 4m N. of Jct. with Hwy. 11 northerly	Granular base, grading, culverts	4 (completed)
Part of Lot 8, Concession 4, Dance Township	Grading, culverts	2.18
From Lake Despair southerly	Bituminous prime, Bituminous surface	9

614—HIGHWAY 17 TO MANITOUWADGE

18.5m S. of Manitouwadge southerly	Granular base, grading, culverts, crushed gravel and stone, bridge	Completed
------------------------------------	--	-----------

615—HIGHWAY 71 TO END OF HIGHWAY

From Jct. with Hwy. 71 northeasterly	Crushed gravel and stone	12.5
--------------------------------------	--------------------------	------

617—HIGHWAY 11 TO SEC. HIGHWAY 600

From Jct. with Hwy. 11 to Jct. with Hwy. 600	Crushed gravel and stone	14.4
--	--------------------------	------

618—HIGHWAY 105 TO STARRAT OLSEN

From Jct. Hwy. 105 westerly	Crushed gravel and stone	7.20
-----------------------------	--------------------------	------

619—HIGHWAY 11 TO SEC. HIGHWAY 621

From Jct. Hwy. 11 northerly	Crushed gravel and stone	25.5
-----------------------------	--------------------------	------

620—HIGHWAY 62 TO HIGHWAY 28

Hamlet of Apsley	Granular base, grading, culverts	0.81 (completed)
From Apsley easterly	Granular base, grading, culverts, crushed gravel and stone, bituminous surface, pavement	
From Jct. Hwy. 62 westerly	Bituminous surface	6.3

621—HIGHWAY 11 TO END OF HIGHWAY

From Jct. with Hwy. 11 northerly	Crushed gravel and stone	40.1
----------------------------------	--------------------------	------

624—HIGHWAYS 11 AND 569 TO LARDER LAKE

Jct. Hwy. 11 to Larder Lake	Crushed gravel and stone	26.3
From Jct. Hwys. 624 and 569 northerly	Granular base	1.0

Location	Type of Work	Miles or jobs completed this fiscal year
From 13m S. of Hwy. 66 northerly and from 2.6m N. of Jct. of Hwy. 569 northerly	Bituminous prime	6.74

625—CARAMAT TO HIGHWAY 11

Intersection Hwys. 11 and 625 southerly	Bituminous prime, bituminous surface, crushed gravel and stone	Partially completed
From Caramat northerly	Granular base	4.0

626—MATHESON TO PORQUIS JUNCTION

Matheson northerly	Bituminous prime, bituminous surface	4.0
Hamlet of Val Gagne	Crushed gravel and stone, grading, culverts, granular base, pavement	0.92
Porquis Jct. to Matheson	Crushed gravel and stone	20

629—TIMMINS TO TIMMINS AIRPORT

From Timmins northerly	Crushed gravel and stone	1.10
From 1.3m S. of Timmins north limits northerly	Crushed gravel and stone, grading, culverts, granular base, pavement	6.29 (completed)

630—KIOSK TO HIGHWAY 17

9m S. of Hwy. 17 southerly	Bituminous prime	3.6
Kiosk to Hwy. 17	Crushed gravel and stone	18.1

631—SOUTH OF WEST BEATON NORTHERLY TO HIGHWAY 11

From Hwy. 17 White River northerly	Crushed gravel and stone, granular base, grading, culverts	Partially completed
From Hwy. 17 at White River northerly 12.5	Bridge	Completed
Hornepayne northerly	Bituminous surface	34
Hornepayne northerly	Bituminous prime	10.6

634—VAL CARON TO JCT. HIGHWAY 144

Jct. Hwys. 17 and 658 northwesterly	Crushed gravel and stone	3.65
-------------------------------------	--------------------------	------

637—HIGHWAY 69 TO KILLARNEY

Highway 69 to Killarney	Bituminous prime	42
-------------------------	------------------	----

638—DUNNS VALLEY TO ECHO BAY

Thessalon River Bridge easterly	Bituminous prime	1.0
---------------------------------	------------------	-----

639—HIGHWAY 108 TO HIGHWAY 129

Location	Type of Work	Miles or jobs completed this fiscal year
Hwy. 108 to Hwy. 639	Bituminous prime	14.2

640—JCT. HIGHWAY 571 TO EARLTON AIRPORT

Jct. Hwy. 571 to Earlton Airport	Crushed gravel and stone	1.7
----------------------------------	--------------------------	-----

641—HIGHWAY 17 TO PELLATT

From Jct. with Hwy. 17 northerly	Crushed gravel and stone	8.4
----------------------------------	--------------------------	-----

642—ALCONA TO HIGHWAY 72

From First Street in Sioux Lookout westerly	Crushed gravel and stone	11.5
---	--------------------------	------

644—HIGHWAY 69 TO END OF HIGHWAY

From Hwy. 69 westerly	Bituminous prime	0.5
-----------------------	------------------	-----

645—BYNG INLET TO SEC. HIGHWAY 529

From Hwy. 529 westerly	Bituminous prime	2.5
------------------------	------------------	-----

647—VERMILION BAY TO BLUE LAKE PROVINCIAL PARK

From Jct. with Hwy. 17 northwesterly	Crushed gravel and stone	5.30
Jct. Hwy. 17 northerly	Granular base, grading, culverts	2.18 (completed)

650—JCT. HIGHWAY 112 TO ONR CROSSING

Jct. Hwy. 112 to ONR Crossing	Crushed gravel and stone	4.7
-------------------------------	--------------------------	-----

654—HIGHWAY 11 TO SEC. HIGHWAY 534

Hwy. 11 to Jct. Hwy. 534	Crushed gravel and stone	14.2
From 6m W. of Jct. of Hwys 11 and 654 westerly	Granular base	1.50 (completed)

655—HIGHWAY 101 TO WARK-KIDD TWP. BOUNDARY

Jct. Hwy. 101 to Wark-Kidd Twp. Boundary	Crushed gravel and stone	13.4
--	--------------------------	------

657—HIGHWAY 105 TO GOVERNMENT DOCKS

From Jct. with Hwy. 105 N. of Ear Falls easterly	Crushed gravel and stone	3.70
--	--------------------------	------

658—HIGHWAY 17 TO FAIRBANK PROVINCIAL PARK

From Jct. Hwys. 17 and 658 northwesterly	Crushed gravel and stone	0.75
--	--------------------------	------

Location	Type of Work	Miles or jobs completed this fiscal year
From 5.4m W. of Jct. of Hwys. 17 and 658 northwesterly	Granular base, grading, culverts	0.75
From Jct. Old Hwy. 17 northerly	Bituminous prime	6.8

659—SEC. HIGHWAY 604 TO HIGHWAY 128

From Jct. with Hwy. 604 northwesterly	Crushed gravel and stone	11.30
---------------------------------------	--------------------------	-------

660—HIGHWAY 69 TO HIGHWAY 103

From Hwy. 103 easterly	Bituminous prime	9.8
From 0.8m E. of Hwy. 103 easterly	Crushed gravel and stone, granular base	2.0

TERTIARY ROAD 804—HIGHWAY 105 TO LOWER MANITOU FALLS DAM

From Jct. with Hwy. 5 south of Ear Falls westerly	Crushed gravel and stone	13.2
--	--------------------------	------

TERTIARY ROAD 805—SEC. HIGHWAY 539A TO END OF HIGHWAY

Sec. Hwy. 539A to end of Hwy.	Crushed gravel and stone	32.8
-------------------------------	--------------------------	------

TERTIARY ROAD 807—JCT. HIGHWAY 11 TO FRASERDALE

Smooth Rock Falls northerly	Bituminous prime	45
-----------------------------	------------------	----

Appendices

Financial Branch

1. Department Expenditures on King's Highways, Secondary Highways, Tertiary, Access and Industrial Roads, Connecting Links, Development Roads, Roads in Unincorporated Townships by County and Territorial District 108
2. Development Road Expenditure in Municipalities by County and Territorial Districts 126
3. Department Expenditures by Highways 130

Operations Branch — Municipal Roads Office

4. Summary of County Road Expenditures 136
5. Mileage of Urban Road Surfaces — 1970 138
6. Mileage of Rural Road Surfaces — 1970 140

Program Office

7. Summary of King's Highway Mileage by Highway Districts 142
8. Summary of Secondary Highway Mileage by Highway Districts 142
9. Summary of Tertiary Road Mileage by Highway Districts 142
10. Road Mileages in Ontario — 1970 143
11. Types of Surface on King's Highways 143
12. Types of Surface on Secondary Highways 144
13. Types of Surface on Tertiary Roads 144

Services Branch — Right-of-Way Office

14. Schedule of Controlled Access Highways 145
15. Schedule of Existing Roads Assumed as Portions of The King's Highway, Secondary Highway and Tertiary Road Systems 146
16. Schedule of Designations and Re-Designations of The King's Highway, Secondary Highway and Tertiary Road Systems 147
17. Schedule of Reversions and Transfers of sections of The King's and Secondary Highway Systems 153

APPENDIX No. 1

Department Expenditures on King's Highways, Secondary Highways,
Tertiary Roads, Access and Industrial Roads, Connecting Links,
Development Roads, Roads in Unincorporated Townships,
By County, and Regional Municipality Territorial Districts

April 1, 1970 to March 31, 1971

County	Construction	Maintenance	Total
Brant			
Highway 2	\$ 18,907	\$ 139,312	\$ 158,219
" 5	—	290,835	290,835
" 24	22,304	73,214	95,518
" 24A	89,514	48,506	138,020
" 53	1,308	70,452	71,760
" 54	6,975	56,450	63,425
" 99	—	15,058	15,058
" 403	44,791	65,474	110,265
Connecting Links:			
City of Brantford	604,096	—	604,096
Town of Paris	1,683	648	2,331
Development Roads	67,730	—	67,730
Other program:			
Brantford Expressway	1,395,254	—	1,395,254
Sidewalks	1,355	—	1,355
	<u>\$ 2,253,917</u>	<u>\$ 759,949</u>	<u>\$ 3,013,866</u>
Bruce			
Highway 4	\$ 698,322	\$ 112,165	\$ 810,487
" 6	604,290	185,386	789,676
" 9	14,924	139,362	154,286
" 21	168,877	185,500	354,377
" 86	1,485	31,487	32,972
Connecting Links:			
Town of Kincardine	97,601	4,806	102,407
Town of Port Elgin	—	4,962	4,962
Town of Southampton	—	3,882	3,882
Town of Walkerton	—	2,103	2,103
Town of Wiarton	—	551	551
Village of Lucknow	—	2,657	2,657
Village of Mildmay	293	478	771
Village of Teeswater	—	1,083	1,083
Development Roads	210,670	—	210,670
Ferries	—	62,701	62,701
Lands and Buildings	94	—	94
	<u>\$ 1,796,556</u>	<u>\$ 737,123</u>	<u>\$ 2,533,679</u>
Dufferin			
Highway 9	\$ 547	\$ 67,074	\$ 67,621
" 10	425,908	91,375	517,283
" 24	221	56,206	56,427
" 89	412	67,724	68,136
" 104	64cr.	4,739	4,675
" 136	54	1,498	1,552
Connecting Links:			
Town of Orangeville	—	7,983	7,983
Village of Shelburne	—	1,652	1,652
Development Roads	748,942	—	748,942
Lands and Buildings	380	—	380
	<u>\$ 1,176,400</u>	<u>\$ 298,251</u>	<u>\$ 1,474,651</u>

County	Construction	Maintenance	Total
Elgin			
Highway 3	\$ 104,927	\$ 330,265	\$ 435,192
" 4	42,976	73,182	116,158
" 19	26,688	48,653	75,341
" 73	1,673	54,233	55,906
" 74	815	51,223	52,038
" 76	177	24,056	24,233
" 401 (M.-C.F.)	16,296	195,546	211,842
Connecting Links:			
Town of Aylmer	33,886	5,912	39,798
Village of Belmont	—	2,004	2,004
Village of Port Burwell	—	1,267	1,267
Development Roads	992,752	—	992,752
Other program:			
St. Thomas By-Pass	97,015	—	97,015
Lands and Buildings	821	—	821
	<u>\$ 1,318,026</u>	<u>\$ 786,341</u>	<u>\$ 2,104,367</u>
Essex			
Highway 2	3,622	56,442	60,064
" 3	2,757,276	80,910	2,838,186
" 18	120,859	171,076	291,935
" 18A	9,724	44,115	53,839
" 77	20,957	33,008	53,965
" 98	54,451	64,845	119,296
" 114	5,596	—	5,596
" 401 (M.-C.F.)	8,620	163,494	172,114
Other Program:			
E. C. Row Expressway (Windsor)	3,724,305	—	3,724,305
Connecting Links:			
City of Windsor	192,354	—	192,354
Town of Amherstburg	—	512	512
Town of Belle River	—	965	965
Town of Essex	8,469	1,167	9,636
Town of Harrow	—	489	489
Town of Kingsville	—	949	949
Town of Leamington	—	1,947	1,947
Development Roads	1,981	—	1,981
Lands and Buildings	1,217	—	1,217
	<u>\$ 6,909,431</u>	<u>\$ 619,919</u>	<u>\$ 7,529,350</u>
Frontenac			
Highway 2	179,814	74,421	254,235
" 7	76,826	93,031	169,857
" 15	8,021	66,015	74,036
" 33	131,721	18,577	150,298
" 38	1,113,525	150,389	1,263,914
" 41	913,629	21,479	935,108
" 95	38	40,118	40,156
" 96	10,854	130,004	140,858
" 401 (M.-C.F.)	14,729	161,143	175,872
Sec. Hwy. 506	3,262	52,085	55,347
" 509	—	43,603	43,603
Connecting Link			
City of Kingston	133,163	—	133,163
Ferries	—	490,742	490,742
Sidewalks	4,558	—	4,558
Development Roads	1,390,823	—	1,390,823
Lands and Buildings	1,658	128	1,786
	<u>\$ 3,982,621</u>	<u>\$ 1,341,735</u>	<u>\$ 5,324,356</u>

DEPARTMENT OF HIGHWAYS, ONTARIO

County		Construction	Maintenance	Total
Grey				
Highway 4		\$ 491,590	\$ 124,290	\$ 615,880
" 6		1,169	202,369	203,538
" 10		59,626	147,207	206,833
" 24	6cr.		14,638	14,632
" 26		215,223	276,315	491,538
" 70		57	29,297	29,354
" 89		115,546	33,633	149,179
Connecting Links:				
City of Owen Sound		3,750	—	3,750
Town of Durham		—	2,382	2,382
Town of Hanover		—	650	650
Town of Meaford		13,373	543	13,916
Town of Thornbury		803	160	963
Village of Chatsworth		—	1,269	1,269
Village of Flesherton		10,787	67	10,854
Village of Markdale		161,671	—	161,671
Development Roads		665,897	—	665,897
		\$ 1,739,486	\$ 832,820	\$ 2,572,306
Haldimand				
Highway 3		\$ 44,881	\$ 211,313	\$ 256,194
" 6		2,392	80,369	82,761
" 54		191	60,071	60,262
" 56		607	28,976	29,583
Connecting Links:				
Town of Caledonia		—	2,253	2,253
Town of Dunnville		—	60,409	60,409
Village of Cayuga		—	1,172	1,172
Village of Hagersville		—	1,229	1,229
Village of Jarvis		—	4,438	4,438
Development Roads		259,099	—	259,099
		\$ 307,170	\$ 450,230	\$ 757,400
Halton				
Highway 2		\$ 361,869	\$ 19,186	\$ 381,055
" 5		172,175	224,504	396,679
" 6		1,087	15,603	16,690
" 7		1,147,145	56,216	1,203,361
" 25		9,312	123,209	132,521
" 122		65,592	910	66,502
" 401 (M.-C.F.)		646,448	202,294	848,742
" 403		354,366	88,847	443,213
Queen Elizabeth Way		6,983,522	263,131	7,246,653
Connecting Links:				
Town of Acton		—	4,769	4,769
Town of Burlington		387,820	5,580	393,400
Town of Georgetown		57,443	4,368	61,811
Town of Milton		26,203	4,545	30,748
Town of Oakville		37,053	—	37,053
		\$ 10,250,035	\$ 1,013,162	\$ 11,263,197
Hastings				
Highway 2		927,561	106,925	1,034,486
" 7		1,424,422	67,600	1,492,022
" 14		945,580	77,329	1,022,909
" 28		—	28,282	28,282
" 33		58,382	36,785	95,167
" 37		22,200	128,381	150,581
" 49		1,895	6,236	8,131
" 62		954,525	264,972	1,219,497
" 121		—	4,374	4,374
" 127		1,347	32,896	34,243
" 401 (M.-C.F.)		421,411	218,962	640,373
Sec. Hwy. 500		832,280	60,734	893,014
" " 502		16	9,353	9,369
" " 504		—	703	703

County	Construction	Maintenance	Total
Sec. Hwy. 517	—	19,935	19,935
" " 620	56	36,873	36,929
Connecting Links:			
City of Belleville	338,320	—	338,320
Town of Deseronto	—	521	521
Town of Trenton	150,860	—	150,860
Village of Bancroft	49,335	9,931	59,266
Village of Frankford	114,977	412	115,389
Village of Madoc	—	452	452
Village of Marmora	133,626	1,199	134,825
Village of Stirling	—	1,484	1,484
Village of Tweed	—	330	330
Development Roads	1,951,177	—	1,951,177
Lands and Buildings	20,830	—	20,830
	\$ 8,348,800	\$ 1,114,669	\$ 9,463,469
Huron			
Highway 4	\$ 827,442	\$ 184,651	\$ 1,012,093
" 8	16,643	88,663	105,306
" 9	—	4,924	4,924
" 21	2,732cr.	163,576	160,844
" 23	274cr.	14,703	14,429
" 81	22cr.	17,215	17,193
" 83	48cr.	58,980	58,932
" 84	295cr.	29,084	28,789
" 86	886cr.	96,826	95,940
" 87	457cr.	44,370	43,913
Connecting Links:			
Town of Clinton	60,299	2,544	62,843
Town of Exeter	135,637	1,865	137,502
Town of Goderich	—	972	972
Town of Seaforth	—	753	753
Town of Wingham	31,804	3,744	35,548
Lands and Buildings	1,980	—	1,980
Development Roads	56,854	—	56,854
Sidewalks	1,841	—	1,841
	\$ 1,127,786	\$ 712,870	\$ 1,840,656
Kent			
Highway 2	\$ 43,641	\$ 91,204	\$ 134,845
" 3	30,140	113,754	143,894
" 21	359cr.	84,693	84,334
" 40	11,502	75,074	86,576
" 51	79,120	9,535	88,655
" 78	424cr.	30,694	30,270
" 79	251cr.	9,343	9,092
" 401 (M.-C.F.)	626,955	210,907	837,862
Connecting Links:			
City of Chatham	155,456	—	155,456
Town of Blenheim	—	986	986
Town of Bothwell	—	1,651	1,651
Town of Dresden	—	1,485	1,485
Town of Ridgetown	—	1,001	1,001
Town of Tilbury	—	27,650	27,650
Town of Wallaceburg	147,542	22,660	170,202
Village of Thamesville	—	448	448
Village of Wheatley	41,882	296	42,178
Lands and Buildings	21,623	—	21,623
Development Roads	1,903	—	1,903
	\$ 1,158,730	\$ 681,381	\$ 1,840,111
Lambton			
Highway 7	\$ 2,055cr.	\$ 258,864	\$ 256,809
" 21	383,482	174,362	557,844
" 22	176cr.	5,063	4,887
" 40	771,400	73,370	844,770
" 40A	—	8,249	8,249

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Highway 79	1,057cr.	106,964	105,907
" 80	227,903	78,044	305,947
" 82	405cr.	18,733	18,328
" 402	1,335,861	25,050	1,360,911
Connecting Links:			
City of Sarnia	486,616	—	486,616
Town of Forest	—	1,383	1,383
Village of Grand Bend	8,219	2,938	11,157
Village of Thedford	—	1,047	1,047
Village of Watford	—	944	944
Village of Wyoming	—	1,456	1,456
Development Roads	553,633	—	553,633
	\$ 3,763,421	\$ 756,467	\$ 4,519,888
Lanark			
Highway 7	\$ 405,886	\$ 151,931	\$ 557,817
" 15	—	55,687	55,687
" 29	5,798	61,755	67,553
" 43	135	62,753	62,888
" 44	71	6,041	6,112
Sec. Hwy. 511	177	30,102	30,279
Connecting Links:			
Town of Almonte	—	219	219
Town of Carleton Place	—	527	527
Town of Perth	4,721	7,306	12,027
Town of Smiths Falls	40,847	—	40,847
Development Roads	1,265,596	8,695	1,274,291
Weigh Scales	—	2,124	2,124
	\$ 1,723,231	\$ 387,140	\$ 2,110,371
Leeds and Grenville			
Highway 2	\$ 1,793	\$ 153,318	\$ 155,111
" 25	775	55,739	56,514
" 15	293,961	118,401	412,362
" 16	26,501	58,384	84,885
" 29	834	88,497	89,331
" 32	88	36,618	36,706
" 42	226,668	95,494	322,162
" 43	59,210	42,556	101,766
" 137	—	10,245	10,245
" 401 (M.-C.F.)	172,682	442,240	614,922
" 416	2,417,605	—	2,417,605
Connecting Links:			
Town of Gananoque	15,748	—	15,748
Town of Kemptville	—	379	379
Village of Athens	—	640	640
Village of Merrickville	176,527	1,027	177,554
Village of Westport	—	827	827
Development Roads	492,723	33,812	526,535
Lands and Buildings	9,003	—	9,003
	\$ 3,894,118	\$ 1,138,177	\$ 5,032,295
Lennox and Addington			
Highway 2	\$ 147	\$ 80,846	\$ 80,993
" 7	2,664	24,533	27,197
" 33	36,590	262,460	299,050
" 41	208,865	179,976	388,841
" 133	44	19,603	19,647
" 401 (M.-C.F.)	49	131,189	131,238
Sec. Hwy. 500	4,672	15,785	20,457
" 502	5,111	18,933	24,044
Connecting Link:			
Village of Bath	—	402	402
Development Roads	887,182	—	887,182
Ferries	5,568	141,497	147,065
	\$ 1,150,892	\$ 875,224	\$ 2,026,116

County		Construction	Maintenance	Total
Middlesex				
Highway	2			
"	4	\$ 236,820	\$ 181,240	\$ 418,060
"	7	379,724	109,056	488,780
"	22	27,125	132,188	159,313
"	23	683	83,230	83,913
"	73	251	25,363	25,614
"	74	394	17,449	17,843
"	76	749	19,786	20,535
"	80	—	3,117	3,117
"	81	216,263	28,317	244,580
"	126	86,872	100,773	187,645
"	135	8,357	22,465	30,822
"	401 (M.-C.F.)	14	11,071	11,085
		4,070	198,493	202,563
Connecting Links:				
	City of London	17,718cr.	11,259	cr.6,459
	Town of Parkhill	—	884	884
	Town of Strathroy	—	270	270
	Village of Glencoe	4,728	164	4,892
	Village of Lucan	—	1,796	1,796
Lands and Buildings		370	—	370
Sidewalks		500	—	500
		\$ 949,202	\$ 946,921	\$ 1,896,123
Niagara				
Highway	3	\$ 343,355	\$ 199,692	\$ 543,047
"	3A	232	38,978	39,210
"	3C	—	27,910	27,910
"	8	43,258	108,361	151,619
"	8A	93	12,091	12,184
"	20	1,274,492	177,617	1,452,109
"	55	—	65,573	65,573
"	57	114	35,774	35,888
"	58	354,830	216,571	571,401
"	140	130,525	—	130,525
"	405	27,286	57,788	85,074
"	406	2,412,815	57,401	2,470,216
Queen Elizabeth Way		10,598,643	722,305	11,320,948
Other Programs:				
	Main St. East Tunnel (Welland)	4,941,613	—	4,941,613
	Thorold Tunnel	79,316	—	79,316
Connecting Links:				
	City of Niagara Falls	211,683	—	211,683
	City of St. Catharines	91,601	—	91,601
	City of Welland	258,874	—	258,874
	Town of Lincoln	—	216	216
	Town of Fort Erie	—	1,338	1,338
	Town of Grimsby	—	216	216
Lands and Buildings		1,625	—	1,625
		\$ 20,770,355	\$ 1,721,831	\$ 22,492,186
Norfolk				
Highway	3	\$ 377,845	\$ 127,792	\$ 505,637
"	6	228,890	31,039	259,929
"	19	66,157	9,268	75,425
"	24	402,959	99,279	502,238
"	59	50,673	76,933	127,606
Connecting Links:				
	Town of Delhi	—	1,809	1,809
	Town of Port Dover	—	2,152	2,152
	Town of Simcoe	—	3,184	3,184
Development Roads		408,932	—	408,932
		\$ 1,535,456	\$ 351,456	\$ 1,886,912

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Northumberland and Durham			
Highway 2	\$ 827,641	\$ 299,423	\$ 1,127,064
" 7	812	5,300	6,112
" 7A	132,025	91,854	223,879
" 28	85,592	114,269	199,861
" 30	466	93,024	93,490
" 33	113,355	20,668	134,023
" 35	7,891	188,184	196,075
" 45	2,256	90,047	92,303
" 106	—	12,908	12,908
" 115	7,510	264,861	272,371
" 401	556,813	583,115	1,139,928
Connecting Links:			
Town of Bowmanville	481	108	589
Town of Campbellford	—	863	863
Town of Cobourg	30,904	5,186	36,090
Town of Port Hope	16,582	5,306	21,888
Town of Trenton	37,727	—	37,727
Village of Brighton	—	2,954	2,954
Village of Colborne	—	788	788
Village of Hastings	—	907	907
Village of Newcastle	—	1,049	1,049
Development Roads	17,500	—	17,500
	\$ 1,837,555	\$ 1,780,814	\$ 3,618,369
Ontario			
Highway 2	\$ 266,418	\$ 106,922	\$ 373,340
" 7	140,837	305,961	446,798
" 7A	585cr.	43,372	42,787
" 12	1,968	267,874	269,842
" 47	199,018	101,331	300,349
" 48	42,139	139,141	181,280
" 69	1,775cr.	283,207	281,432
" 401	303,817	289,669	593,486
Sec. Hwy. 503	334	5,371	5,705
Connecting Links:			
City of Oshawa	1,156	—	1,156
Town of Uxbridge	—	1,837	1,837
Town of Whitby	1,686	12,204	13,890
Village of Beaverton	200,597	1,052	201,649
Development Roads	25,692	—	25,692
Sidewalks	6,101	—	6,101
	\$ 1,187,403	\$ 1,557,941	\$ 2,745,344
Ottawa-Carleton			
Highway 7	\$ 1,024,549	\$ 79,344	\$ 1,103,893
" 16	287,392	95,158	382,550
" 17	243,687	213,309	456,996
" 29	153	17,551	17,704
" 31	11,094	613,685	624,779
" 44	177	18,833	19,010
" 416	431,066	—	431,066
" 417	3,180,385	—	3,180,385
Other programs:			
Ottawa-Queensway	93,953	305,159	399,112
MacDonald-Cartier Bridge (Ottawa)	9,359	—	9,359
Connecting Link:			
City of Ottawa	90,395	—	90,395
Development Roads	282	2,438	2,720
Lands and Buildings	873	—	873
	\$ 5,373,365	\$ 1,345,477	\$ 6,718,842
Oxford			
Highway 2	\$ 16,197	\$ 90,944	\$ 107,141
" 3	197,995	10,871	208,866
" 7	2,936	3,302	6,238
" 19	24,620	269,881	294,501

County		Construction	Maintenance	Total
"	53	—	—	—
"	59	—	22,400	22,400
"	97	1,036	161,162	162,198
"	401 (M.-C.F.)	5,720	102,946	108,666
Connecting Links:		20,509	291,438	311,947
City of Woodstock		—	—	—
Town of Ingersoll		—	25,100	25,100
Town of Tillsonburg		25,073	—	25,073
Village of Norwich		—	108	108
Village of Tavistock		—	3,941	3,941
Sidewalks		—	2,753	2,753
		1,980	—	1,980
Peel		\$ 296,066	\$ 984,846	\$ 1,280,912
Highway 2		\$ 33,740	\$ 2,564	\$ 36,304
"	5	55,058	32,000	87,058
"	7	2,164,645	84,382	2,249,027
"	9	302,674	54,829	357,503
"	10	687,456	298,397	985,853
"	24	563cr.	32,055	31,492
"	50	1,100,539	98,337	1,198,876
"	122	1,647	989	2,636
"	136	763cr.	44,065	43,302
"	401 (M.-C.F.)	300,481	169,571	470,052
"	403	216,296	—	216,296
Queen Elizabeth Way		3,732	169,463	173,195
Other program:		—	—	—
Belfield Expressway		1,733,688	—	1,733,688
Connecting Links:		—	—	—
Town of Brampton		52,848	16,487	69,335
Town of Mississauga		—	26,587	26,587
Town of Port Credit		2,680	16,537	19,217
Village of Bolton		6,894	78	6,972
Perth		\$ 6,661,052	\$ 1,046,341	\$ 7,707,393
Highway 7		\$ 48,874	\$ 108,602	\$ 157,476
"	8	480cr.	74,814	74,334
"	19	683cr.	78,569	77,886
"	23	543,780	162,265	706,045
"	59	145cr.	15,575	15,430
"	83	211cr.	7,135	6,924
"	86	861cr.	44,888	44,027
Connecting Links:		—	—	—
City of Stratford		89,549	24,473	114,022
Town of Listowel		6,073	8,579	14,652
Town of Mitchell		2,258	2,683	4,941
Town of St. Marys		1,087	—	1,087
Village of Milverton		80,028	15cr.	80,013
Lands and Buildings		7,191	—	7,191
Peterborough		\$ 776,460	\$ 527,568	\$ 1,304,028
Highway 7		\$ 138,807	\$ 163,105	\$ 301,912
"	28	1,163,271	181,807	1,345,078
"	30	52	6,983	7,035
"	36	242,982	90,392	333,374
"	45	100	14,871	14,971
"	115	—	2,438	2,438
"	121	—	4,400	4,400
Sec. Hwy. 503		—	7,055	7,055
"	504	11,496	59,064	70,560
"	507	79,596	106,112	185,708
"	620	702,604	39,259	741,863
"	620A	—	729	729
"	649	200	15,242	15,442

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Connecting Links:			
City of Peterborough	7,616	—	7,616
Village of Havelock	—	1,761	1,761
Village of Lakefield	—	3,141	3,141
Village of Norwood	—	586	586
Development Roads	985,052	—	985,052
Sidewalks	746	—	746
	\$ 3,332,522	\$ 696,945	\$ 4,029,467
Prescott and Russell			
Highway 17	\$ 660,463	\$ 417,552	\$ 1,078,015
" 34	382	35,435	35,817
" 417	1,833,496	—	1,833,496
Connecting Links:			
Town of Hawkesbury	—	7,534	7,534
Town of Rockland	105,137	636	105,773
Town of Vankleek Hill	—	1,202	1,202
Sidewalks	10,075	—	10,075
Weigh Scales	—	2,017	2,017
Development Roads	1,732,160	—	1,732,160
	\$ 4,341,713	\$ 464,376	\$ 4,806,089
Prince Edward			
Highway 14	\$ —	\$ 60,054	\$ 60,054
" 33	250,449	113,334	363,783
" 49	113,086	46,446	159,532
Connectings Links:			
Town of Picton	1,588	1,859	3,447
Village of Bloomfield	7,510	636	8,146
Village of Wellington	—	747	747
Development Roads	86,049	—	86,049
Ferries	—	139,996	139,996
	\$ 458,682	\$ 363,072	\$ 821,754
Renfrew			
Highway 17	\$ 1,997,594	\$ 452,611	\$ 2,450,205
" 29	29	4,385	4,414
" 41	2,115,954	147,885	2,263,839
" 60	8,444	148,835	157,279
" 62	8,034	151,150	159,184
" 132	37,880	58,327	96,207
Sec. Hwy. 500	35,509	35,844	71,353
" " 508	203,317	44,528	247,845
" " 511	1,387	16,104	17,491
" " 512	117,416	79,694	197,110
" " 513	—	31,159	31,159
" " 515	52,438	109,896	162,334
" " 517	—	17,085	17,085
" " 635	—	5,369	5,369
" " 653	—	17,774	17,774
Connecting Links:			
Town of Arnprior	26,442	—	26,442
Town of Pembroke	4,189	42,261	46,450
Town of Renfrew	7,380	32,094	39,474
Village of Barry's Bay	—	4,066	4,066
Village of Eganville	8,071	209	8,280
Development Roads	743,011	3,662	746,673
Lands and Buildings	2,704	—	2,704
Weigh Scales	—	2,248	2,248
	\$ 5,369,799	\$ 1,405,186	\$ 6,774,985
Simcoe			
Highway 9	\$ 623,764	\$ 37,616	\$ 661,380
" 11	46,321	448,042	494,363
" 12	197,634	170,557	368,191
" 24	29,982	60,383	90,365
" 26	869,161	159,200	1,028,361
" 27	24,847	307,733	332,580

County	Construction	Maintenance	Total
" 69	—	1,713	1,713
" 88	43	26,952	26,995
" 89	843	83,973	84,816
" 90	21	56,678	56,699
" 91	1,320	18,629	19,949
" 92	488	34,330	34,818
" 93	408	85,977	86,385
" 103	1,305	25,077	26,382
" 400	88,421	427,378	515,799
Connecting Links:			
City of Barrie	48,697	—	48,697
Town of Alliston	—	4,649	4,649
Town of Bradford	—	10,313	10,313
Town of Collingwood	264,547	2,527	267,074
Town of Midland	32,598	3,531	36,129
Town of Penetanguishene	98,934	4,114	103,048
Town of Stayner	—	798	798
Village of Coldwater	—	2,312	2,312
Village of Cookstown	—	4,246	4,246
Village of Elmvale	—	3,233	3,233
Village of Port McNicoll	—	1,299	1,299
Village of Victoria Harbour	—	3,748	3,748
Village of Wasaga Beach	1,159	853	2,012
Development Roads	242,057	—	242,057
Lands and Buildings	114	—	114
	\$ 2,572,664	\$ 1,985,861	\$ 4,558,525
Stormont, Dundas and Glengarry			
Highway 2	\$ 15,293	\$ 137,466	\$ 152,759
" 31	4,498	292,405	296,903
" 34	8,487	106,424	114,911
" 43	47,870	229,406	277,276
" 138	170,723	33,243	203,966
" 401 (M.-C.F.)	281,956	472,097	754,053
" 417	752,594	—	752,594
Connecting Links:			
City of Cornwall	93,922	—	93,922
Town of Alexandria	23,146	5,970	29,116
Village of Chesterville	—	1,873	1,873
Village of Winchester	—	1,356	1,356
Development Roads	1,359,133	—	1,359,133
Lands and Buildings	1,026	—	1,026
Weigh Scales	—	2,663	2,663
Sidewalks	2,012	—	2,012
	\$ 2,760,660	\$ 1,282,903	\$ 4,043,563
Victoria			
Highway 7	\$ 153,759	\$ 116,497	\$ 270,256
" 35	27,169	126,836	154,005
" 35A	421	6,047	6,468
" 36	6,798	62,305	69,103
" 46	4,681	79,568	84,249
" 48	1,843	12,081	13,924
" 121	1,647	69,941	71,588
Sec. Hwy. 503	278,751	122,623	401,374
" " 505	1,209	33,134	34,343
" " 649	—	16,792	16,792
Connecting Links:			
Town of Lindsay	50,933	11,206	62,139
Village of Bobcaygeon	—	2,676	2,676
Village of Fenelon Falls	—	1,964	1,964
Village of Omemee	7,819	1,427	9,246
Village of Woodville	1,267	1,068	2,335
Development Roads	995,367	—	995,367
	\$ 1,531,664	\$ 664,165	\$ 2,195,829

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Waterloo			
Highway 7	\$ 546,136	\$ 107,552	\$ 653,688
" 8	6,267,453	116,979	6,384,432
" 24	28,455	29,854	58,309
" 24A	—	18,648	18,648
" 85	487cr.	26,963	26,476
" 86	103,561	50,171	153,732
" 97	430cr.	55,456	55,026
" 401 (M.-C.F.)	28,207	120,483	148,690
Connecting Links:			
City of Galt	26,795	3,780	30,575
City of Kitchener	—	780cr.	cr.780
City of Waterloo	60,462	—	60,462
Town of Elmira	—	1,614	1,614
Town of Hespeler	111,622	5,174	116,796
Town of New Hamburg	41,083	—	41,083
Town of Preston	1,435	17,840	19,275
Lands and Buildings	2,104	—	2,104
Sidewalks	1,105	—	1,105
	\$ 7,217,501	\$ 553,734	\$ 7,771,235
Wellington			
Highway 6	\$ 1,021,965	\$ 150,653	\$ 1,172,618
" 7	147	89,194	89,341
" 9	254,478	94,538	349,016
" 23	133cr.	6,911	6,778
" 24	107	105,666	105,773
" 25	7,567	25,593	33,160
" 86	908cr.	43,785	42,877
" 87	343cr.	18,921	18,578
" 89	753,445	59,047	812,492
" 401 (M.-C.F.)	3,907	131,599	135,506
Connecting Links:			
City of Guelph	201,323	—	201,323
Town of Fergus	149,323	2,030	151,353
Town of Harriston	137,892	1,652	139,544
Town of Mount Forest	—	4,864	4,864
Town of Palmerston	—	903	903
Village of Arthur	39,862	991	40,853
Village of Clifford	—	1,407	1,407
Village of Erin	—	1,514	1,514
Development Roads	477,221	—	477,221
Lands and Buildings	14,335	—	14,335
Sidewalks	165	—	165
	\$ 3,060,353	\$ 739,268	\$ 3,799,621
Wentworth			
Highway 2	\$ 16,425	\$ 95,279	\$ 111,704
" 5	20,841	106,810	127,651
" 6	1,038,659	325,694	1,364,353
" 8	1,862	102,712	104,574
" 20	8,825	63,315	72,140
" 52	46,771	60,185	106,956
" 53	1,145	134,245	135,390
" 56	2,111	43,999	46,110
" 97	3,016	40,024	43,040
" 99	218,756	48,383	267,139
" 403	6,134	133,998	140,132
Queen Elizabeth Way	1,429,407	171,542	1,600,949
Connecting Links:			
City of Hamilton	1,130,297	2,029	1,132,326
Town of Dundas	—	12,311	12,311
Town of Stoney Creek	—	3,316	3,316
Lands and Buildings	64,260	—	64,260
Sidewalks	2,564	—	2,564
	\$ 3,991,073	\$ 1,343,842	\$ 5,334,915

County		Construction	Maintenance	Total
York				
Highway 2A		\$ 5,234	\$ 23,125	\$ 28,359
" 5		91,391	213	91,604
" 7		787,851	271,106	1,058,957
" 9		352,872	87,232	440,104
" 11		2,713,040	241,288	2,954,328
" 27		10,956,094	443,910	11,400,004
" 47		33,542	20,874	54,416
" 48		267,395	230,044	497,439
" 50		3,880	26,322	30,202
" 117		151cr.	14,039	13,888
" 400		236,141	442,396	678,537
" 401 (M.-C.F.)		21,338,362	1,428,824	22,767,186
" 404		5,090	—	5,090
" 407		348,795	—	348,795
" 427		1,592,788	—	1,592,788
Queen Elizabeth Way		657,344	182,565	839,909
Other Programs:				
International Airport Rd.		352cr.	22,024	21,672
Belfield Expressway		347,370	—	347,370
Connecting Links:				
Town of Aurora		323,805	4,734	328,539
Town of Markham		—	3,517	3,517
Town of Richmond Hill		157,354	6,931	164,285
Village of Stouffville		—	9,758	9,758
Lands and Buildings		121,209	9	121,218
Sidewalks		6,071	—	6,071
		\$ 40,345,125	\$ 3,458,911	\$ 43,804,036
Territorial Districts				
Algoma				
Highway 17		\$ 3,640,806	\$ 827,550	\$ 4,468,356
" 101		534	120,412	120,946
" 108		42,569	71,241	113,810
" 129		230,541	338,002	568,543
Sec Hwy. 538		—	12,288	12,288
" " 546		62,748	337,346	400,094
" " 547		—	9,376	9,376
" " 548		198,734	129,998	328,732
" " 550		11,512	16,927	28,439
" " 552		50	35,015	35,065
" " 552A		—	2,467	2,467
" " 553		—	139,552	139,552
" " 554		135,101	74,520	209,621
" " 555		—	35,625	35,625
" " 556		65,077	113,379	178,456
" " 557		—	62,338	62,338
" " 561		41,470	37,197	78,667
" " 563		—	8,390	8,390
" " 565		—	2,679	2,679
" " 631		1,228,811	219,863	1,448,674
" " 638		5,692	76,420	82,112
" " 639		—	62,418	62,418
" " 651		4,255	78,465	82,720
Connecting Links:				
Township of Michipicoten		—	259	259
Town of Blind River		—	494	494
Town of Thessalon		—	2,319	2,319
Unincorporated Township Roads:				
Local Roads Board		97,912	55,070	152,982
Statute Labour Board		54,810	21,051	75,861
Special — Settlers		983	1,267	2,250
Lands and Buildings		2,332	—	2,332
Ferries		—	173,962	173,962
Weigh Scales		5,265	—	5,265
		\$ 5,829,202	\$ 3,065,890	\$ 8,895,092

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Cochrane			
Highway 11	\$ 755,682	\$ 1,810,966	\$ 2,566,648
" 67	19,010	56,929	75,939
" 101	133,302	210,963	344,265
" 144	4,909	3,320	8,229
Sec. Hwy. 572	16,438	29,793	46,231
" 574	22,769	81,249	104,018
" 576	5,135	34,298	39,433
" 577	71,578	40,332	111,910
" 578	417,794	14,921	432,715
" 579	—	128,157	128,157
" 581	—	6,347	6,347
" 583	35,561	138,114	173,675
" 610	—	31,483	31,483
" 626	452,863	48,642	501,505
" 629	245,571	14,824	260,395
" 631	—	10,861	10,861
" 636	362	14,026	14,388
" 652	—	56,840	56,840
" 655	—	34,427	34,427
Tertiary Road 803	—	4,932	4,932
" 807	24,207	134,895	159,102
Access Road:			
Moonsonnee Road Southerly	39,662	—	39,662
Connecting Links:			
Township of Kendrey	489	—	489
Township of Tisdale	—	2,716	2,716
Town of Cochrane	—	6,542	6,542
Town of Hearst	—	1,013	1,013
Town of Iroquois Falls	—	3,466	3,466
Town of Kapuskasing	16,193	11,945	28,138
Town of Matheson	—	896	896
Town of Timmins	61,365	5,434	66,799
Unincorporated Township Roads:			
Local Roads Board	51,223	155,187	206,410
Statute Labour Board	6,984	12,362	19,346
Special — Settlers	1,757	1,073	2,830
Indian Reserves	—	2,758	2,758
Development Roads	—	97,948	97,948
Lands and Buildings	34,542	50,505	85,047
Ferries	—	28,451	28,451
Sidewalks	4,261	—	4,261
	\$ 2,421,657	\$ 3,286,615	\$ 5,708,272
Haliburton			
Highway 28	\$ 1,814	\$ 21,727	\$ 23,541
" 35	1,621,777	136,313	1,758,090
" 60	—	25,212	25,212
" 121	46,695	155,906	202,601
Sec. Hwy. 503	1,193	78,684	79,877
" 507	103,556	13,142	116,698
" 519	18,241	153,160	171,401
" 530	130,068	53,226	183,294
" 648	774	52,370	53,144
Connecting Link:			
Township of Dysart et al	—	200	200
Development Roads	922,335	—	922,335
Lands and Buildings	519	—	519
	\$ 2,846,972	\$ 689,940	\$ 3,536,912
Kenora			
Highway 17	\$ 3,407,664	\$ 380,014	\$ 3,787,678
" 71	1,553,140	158,533	1,711,673
" 72	261,134	67,858	328,992
" 105	271	167,875	168,146
" 116	381,659	16,832	398,491
" 119	5,968	38,153	44,121
" 125	15,532	12,786	28,318
" 128	44,241	43,228	87,469

County	Construction	Maintenance	Total
Sec. Hwy. 594	29,949	46,940	76,889
" " 596	—	112,237	112,237
" " 598	67,021	4,590	71,611
" " 599	772,633	126,273	898,906
" " 601	462	66,056	66,518
" " 603	—	12,063	12,063
" " 604	150	8,836	8,986
" " 605	—	14,693	14,693
" " 609	—	18,387	18,387
" " 618	—	10,704	10,704
" " 641	43,488	20,689	64,177
" " 642	—	21,802	21,802
" " 646	620,395	3,090	623,485
" " 647	6,348	9,034	15,382
" " 657	—	4,129	4,129
" " 659	—	22,394	22,394
Tertiary Road 804	—	7,820	7,820
" " 808	—	17,532	17,532
Connecting Links:			
Town of Dryden	—	1,492	1,492
Town of Keewatin	—	647	647
Town of Kenora	12,257	7,097	19,354
Unincorporated Township Roads:			
Local Roads Board	23,086	67,755	90,841
Statute Labour Board	7,511	28,631	36,142
Special — Settlers	333	9,316	9,649
Indian Reserves	—	11,213	11,213
Lands and Buildings	9,370	—	9,370
Weigh Scales	1,039	4,327	5,366
	\$ 7,263,651	\$ 1,543,026	\$ 8,806,677
Manitoulin			
Highway 68	\$ 1,291,025	\$ 174,397	\$ 1,465,422
Sec. Hwy. 540	94,152	270,150	364,302
" " 540A	—	19,383	19,383
" " 542	116,732	164,102	280,834
" " 542A	—	5,326	5,326
" " 551	6,889	69,619	76,508
" " 637	13,939	108,104	122,043
Connecting Link:			
Town of Little Current	—	621	621
Unincorporated Township Roads:			
Local Roads Board	400	30,229	30,629
Statute Labour Board	—	10,536	10,536
	\$ 1,523,137	\$ 852,467	\$ 2,375,604
Muskoka			
Highway 11	\$ 2,103,750	\$ 202,833	\$ 2,306,583
" " 35	398,603	36,070	434,673
" " 60	59,463	49,819	109,282
" " 69	1,090,046	87,753	1,177,799
" " 103	1,518	79,939	81,457
" " 118	490,709	123,974	614,683
Sec. Hwy. 501	1,701	64,445	66,146
" " 514	3,635	35,067	38,702
" " 516	310,928	52,020	362,948
" " 525	—	4,215	4,215
" " 527	121,692	98,156	219,848
" " 532	9,268	91,995	101,263
" " 592	—	768	768
" " 612	—	10,920	10,920
" " 632	—	44,654	44,654
" " 660	166,085	42,396	208,481
Connecting Links:			
Town of Bracebridge	—	2,082	2,082
Town of Gravenhurst	18,679	3,219	21,898
Town of Huntsville	225	7,069	7,294
Village of Port Carling	—	2,592	2,592

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Unincorporated Township Roads:			
Local Roads Board	13,635	19,976	33,611
Statute Labour Board	2,611	50,935	53,546
Development Roads	694,691	—	694,691
Lands and Buildings	44,778	—	44,778
	\$ 5,532,017	\$ 1,110,897	\$ 6,642,914
Nipissing			
Highway 11	\$ 810,902	\$ 290,042	\$ 1,100,944
" 17	1,326,090	326,322	1,652,412
" 60	885,454	179,392	1,064,846
" 63	35,663	139,342	175,005
" 64	444,423	171,847	616,270
" 94	105,556	25,645	131,201
" 123	—	1,306	1,306
" 127	—	30,685	30,685
Sec. Hwy. 514	—	2,997	2,997
" " 523	1,204	41,847	43,051
" " 528	—	3,925	3,925
" " 531	—	10,014	10,014
" " 533	61,733	101,772	163,505
" " 539	2,208	93,520	95,728
" " 539A	—	2,337	2,337
" " 630	19,182	47,974	67,156
" " 656	—	4,338	4,338
Tertiary Road 805	2,448	51,101	53,549
Access Road:			
Sherman Mine Road	—	1,409	1,409
Connecting Links:			
City of North Bay	1,162cr.	—	cr.1,162
Town of Sturgeon Falls	—	7,245	7,245
Unincorporated Township Roads:			
Local Roads Board	146,181	115,662	261,843
Statute Labour Board	1,971	2,007	3,978
Special — Settlers	—	638	638
Lands and Buildings	1,797	—	1,797
	\$ 3,843,650	\$ 1,651,367	\$ 5,495,017
Parry Sound			
Highway 11	\$ 131,802	\$ 541,955	\$ 673,757
" 69	226,488	272,648	499,136
" 124	619,665	174,140	793,805
Sec. Hwy. 510	—	5,312	5,312
" " 518	15,380	215,192	230,572
" " 520	140,183	107,051	247,234
" " 522	109,075	117,079	226,154
" " 524	—	10,073	10,073
" " 526	215	8,899	9,114
" " 529	1,464	42,949	44,413
" " 529A	—	11,563	11,563
" " 532	1,022	33,186	34,208
" " 534	19,896	69,785	89,681
" " 559	—	36,405	36,405
" " 592	—	28,540	28,540
" " 612	—	8,621	8,621
" " 632	—	49,677	49,677
" " 644	56	2,200	2,256
" " 645	232	9,597	9,829
" " 654	77,912	38,476	116,388
Connecting Link:			
Town of Parry Sound	—	5,058	5,058
Unincorporated Township Roads:			
Local Roads Board	129,387	200,001	329,388
Statute Labour Board	3,982	59,478	63,460
Special — Settlers	—	16,540	16,540
Indian Reserves	—	13,727	13,727
Development Roads	327,292	135,607	462,899
Lands and Buildings	680	12,266	12,946
	\$ 1,804,731	\$ 2,226,025	\$ 4,030,756

County	Construction	Maintenance	Total
Rainy River			
Highway 11	\$ 4,123	\$ 255,670	\$ 259,793
" 71	—	49,659	49,659
Sec. Hwy. 600	—	100,733	100,733
" " 602	5,487	45,868	51,355
" " 611	—	19,022	19,022
" " 613	90,848	72,126	162,974
" " 615	—	20,391	20,391
" " 617	—	25,727	25,727
" " 619	149	38,152	38,301
" " 621	2,363	44,872	47,235
" " 622	400	8,978	9,378
" " 623	—	4,242	4,242
" " 633	—	4,708	4,708
Connecting Links:			
Town of Fort Frances	2,631	7,731	10,362
Town of Rainy River	—	107	107
Unincorporated Township Roads:			
Local Roads Board	17,826	14,613	32,439
Statute Labour Board	—	10,716	10,716
Special — Settlers	333	253	586
Indian Reserves	—	1,862	1,862
Lands and Buildings	1,437	—	1,437
Weigh Scales	311	980	1,291
	\$ 125,908	\$ 726,410	\$ 852,318
Sudbury			
Highway 17	\$ 2,633,946	\$ 337,744	\$ 2,971,690
" 64	604,027	75,068	679,095
" 68	—	88,706	88,706
" 69	569,177	283,780	852,957
" 101	1,150,584	282,758	1,433,342
" 129	189,304	104,125	293,429
" 144	2,043,297	489,893	2,533,190
Sec. Hwy. 528	—	25,696	25,696
" " 528A	—	10,760	10,760
" " 535	169,814	106,489	276,303
" " 536	—	10,311	10,311
" " 537	14,984	56,328	71,312
" " 539	166,815	16,660	183,475
" " 541	64,293	42,416	106,709
" " 541A	8,100	5,156	13,256
" " 543	65,658	13,591	79,249
" " 544	—	4,687	4,687
" " 545	661	45,897	46,558
" " 549	47,426	40,695	88,121
" " 553	892	21,677	22,569
" " 560	—	108,717	108,717
" " 560A	—	13,672	13,672
" " 606	—	2,812	2,812
" " 607	—	20,002	20,002
" " 607A	—	5,348	5,348
" " 616	—	3,774	3,774
" " 634	—	37,139	37,139
" " 637	18,670	90,367	109,037
" " 658	—	41,233	41,233
" " 661	49,907	7,167	57,074
Tertiary Road 805	—	22,424	22,424
" " 806	—	11,503	11,503
Industrial Roads:			
E. A. Wicks Road	—	1,769	1,769
Connecting Links:			
City of Sudbury	307,788	—	307,788
Town of Capreol	—	1,000	1,000
Town of Espanola	—	2,717	2,717
Town of Webbwood	8,531	—	8,531

DEPARTMENT OF HIGHWAYS, ONTARIO

County	Construction	Maintenance	Total
Unincorporated Township Roads:			
Local Roads Board	111,000	223,050	334,050
Statute Labour Board	—	8,562	8,562
Special — Settlers	2,791	12,994	15,785
Indian Reserves	—	2,777	2,777
Development Roads	535,293	—	535,293
Lands and Buildings	19,075	—	19,075
Sidewalks	1,521	—	1,521
	\$ 8,783,554	\$ 2,679,464	\$ 11,463,018
Thunder Bay			
Highway 11	\$ 1,735,323	\$ 787,311	\$ 2,522,634
" 11A	709,907	64,828	774,735
" 17	1,306,109	600,044	1,906,153
" 61	267,668	78,695	346,363
" 130	26,561	24,641	51,202
Sec. Hwy. 580	—	10,897	10,897
" 582	—	7,342	7,342
" 584	55,377	54,938	110,315
" 584A	—	3,061	3,061
" 585	2,839	57,065	59,904
" 586	—	5,394	5,394
" 587	3,157	61,093	64,250
" 588	214,215	89,243	303,458
" 589	199,876	52,135	252,011
" 590	93,595	50,775	144,370
" 591	—	22,784	22,784
" 593	—	60,421	60,421
" 595	—	66,943	66,943
" 597	10,785	16,783	27,568
" 599	107,853	87,796	195,649
" 608	31,286	33,264	64,550
" 614	92,770	89,816	182,586
" 625	23,255	108,808	132,063
" 627	—	12,830	12,830
" 628	—	9,601	9,601
" 643	1,918	15,949	17,867
Tertiary Road 800	14,036	78,533	92,569
" 801	5,243	4,946	10,189
" 802	—	1,066	1,066
Industrial Road:			
Caramat to Manitouwadge	—	21,726	21,726
Connecting Links:			
City of Thunder Bay	3,594	—	3,594
Town of Geraldton	12,502	7,054	19,556
Unincorporated Township Roads:			
Local Roads Board	174,770	195,010	369,780
Statute Labour Board	—	2,290	2,290
Special — Settlers	5,544	1,940	7,484
Indian Reserves	41,965	1,400	43,365
Lands and Buildings	39,478	—	39,478
	\$ 5,179,626	\$ 2,786,422	\$ 7,966,048
Timiskaming			
Highway 11	\$ 789,263	\$ 274,326	\$ 1,063,589
" 65	644,494	192,932	837,426
" 66	226,611	467,379	693,990
" 101	198,199	30,769	228,968
" 112	167	50,016	50,183
" 144	80,108	55,153	135,261
Sec. Hwy. 558	—	38,692	38,692
" 560	73,033	175,677	248,710
" 562	7,687	29,251	36,938
" 564	—	12,508	12,508
" 566	—	31,486	31,486
" 567	506	44,297	44,803
" 568	—	2,041	2,041
" 569	1,893	84,481	86,374

County	Construction	Maintenance	Total
Sec. Hwy. 570	—	4,185	4,185
" " 571	—	11,778	11,778
" " 573	50,222	25,341	75,563
" " 624	92,564	66,297	158,861
" " 640	—	3,365	3,365
" " 650	—	11,429	11,429
Tertiary Road 809	—	5,261	5,261
Industrial Road:			
E. A. Wicks Road	—	2,030	2,030
Connecting Links:			
Town of Cobalt	4,126	3,239	7,365
Town of Haileybury	—	2,681	2,681
Town of New Liskeard	26,363	4,443	30,806
Unincorporated Township Roads:			
Local Roads Board	35,331	66,271	101,602
Statute Labour Board	4,449	21,351	25,800
Special — Settlers	—	9,752	9,752
Development Roads	7,294	15,776	23,070
Lands and Buildings	—	987	987
Weigh Scales	96	—	96
Sidewalks	1,098	—	1,098
	<u>\$ 2,243,504</u>	<u>\$ 1,743,194</u>	<u>\$ 3,986,698</u>
County and District Totals	\$212,666,899	\$ 58,088,633	\$270,755,532
Sundry Unallocated, District Office Administration, Engineering, Building, Inventory Charges, etc.	\$ 1,910,535	\$ 13,538,752	\$ 15,449,287
Total Expenditure	<u>\$214,577,434</u>	<u>\$ 71,627,385</u>	<u>\$286,204,819</u>

APPENDIX No. 2

Development Road Expenditure in Municipalities by County,
Territorial District, and Regional Municipality

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County or Territorial District
Brant					
888	Blossom Avenue (extension)	3.5	County	\$ 6,424	
929	County Road 50 and 51	1.0	Paris, Town	3,099	
939	County Roads 4 and 16 (part)	1.8	County	53,945	
961	County Road 18 (part)	3.6	County	4,262	\$ 67,730
Bruce					
887	Purple Valley Road (part)	2.7	Albemarle	\$ 210,670	\$ 210,670
Dufferin					
841	County Road 18 (part)	12.5	County	\$ 748,942	\$ 748,942
Elgin					
930	County Road 45 (part)	12.3	County	\$ 611,723	
931	County Road 20 (part)	5.8	County	4,218	
972	County Roads 47 and 48 (part)				
	and 49	8.9	County	19,614	
1023	County Road 16 (part)	6.7	County	357,197	\$ 992,752
Essex					
697	County Road 1 (part)	5.0	County	\$ 1,981	\$ 1,981
Frontenac					
806	Long Lake Road (part)	7.7	Olden	\$ 91,899	
863	County Road 11A (part)	2.2	County	219,766	
957	County Road 10 (part)	3.3	County	15,894	
973	Clarendon Road	9.7	Clarendon, Miller	417,960	
1010	County Road 4A (Wilton Road)	4.8	County	158,161	
1011	County Road 10 (part)	3.4	County	470,431	
1016	County Road 1 (part)	1.4	County	15,105	
1017	County Road 8 (part)	1.8	County	1,607	\$ 1,390,823
Grey					
783	County Road 13 (Flesherton to Thornbury)	25.0	County	\$ 350,738	
886	County Road 10 (part)	17.5	County	315,159	\$ 665,897
Haldimand					
791	County Road 12 (part)				
	Old Indian Line	6.4	County	cr. \$ 1,169	
934	Sandusk Sideroad	8.9	Walpole	260,268	\$ 259,099
Hastings					
801	Weslemkoon Road	11.0	Tudor, Cashel	\$ 170,410	
854	County Road 5 (part)	4.8	County	344,815	
855	County Road 9 (part)	5.6	County	13,378	
856	County Road 3	7.8	County	284,639	
882	Madawaska Road (part)	9.1	Bangor, Wicklow and McClure	438,128	
914	County Roads 7A (part) and 13 (part)	2.0	County	137,860	
970	Wollaston-Lake Townline	5.3	Marmora, Lake and Wollaston	295,237	
978	Fort Stewart Road-McNeaul Hill	1.6	Carlow	10,085	
979	Musclow Road (part)	4.8	Monteagle	256,625	\$ 1,951,177

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County or Territorial District
Huron					
898	County Road 12 (part)	1.3	County	\$ 56,854	\$ 56,854
Kent					
697	County Road 1 (part)	4.9	County	\$ 1,903	\$ 1,903
Lambton					
857	County Road 4	5.4	County	\$ 553,633	\$ 553,633
Lanark					
613	Fallbrooke Westerly	8.0	Bathurst	\$ 506	
846	County Road 5 (part)	6.1	County	62,215	
933	County Road 6 (part)	8.0	County	412,442	
992	Township Road	3.9	Drummond	120,426	
1008	County Road 4 (part) (Westport Road)	6.0	County	587,806	
1020	Various Road Sections	1.5	Beckwith	8,695	
1026	Township Road	1.9	South Sherbrooke	82,201	\$ 1,274,291
Leeds and Grenville					
916	County Road 13	6.2	County	\$ 18,201	
940	Athens-Addison Road (part)	2.0	Rear of Yonge and Escott	71,551	
941	Athens-Addison Road (part)	1.0	Elizabethtown	32,844	
971	County Road 5 (part)	7.0	County	370,127	
1028	Oakleaf Road (part)	3.2	Rear of Leeds and Lansdowne	33,812	\$ 526,535
Lennox and Addington					
868	County Road 9 (part)	4.8	County	\$ 2,136	
900	County Road 3	1.7	County	75,278	
902	Vennachar Road	2.8	Denbigh, Abinger and Ashby	382,003	
907	County Road 14 (part)	4.2	County	10,464	
908	County Road 8 (part)	2.9	County	9,305	
981	County Road 6 (part)	5.1	County	359,150	
999	County Road 6B	2.1	County	19,552	
1000	County Road 14 (part)	2.4	County	22,606	
1001	County Road 4 (part)	0.6	County	6,688	\$ 887,182
Norfolk					
895	County Road 30 (part)	4.6	County	\$ 107,045	
1024	County Road 1 (part)	4.3	County	181,887	
1029	County Road 29 (part)	1.8	County	120,000	\$ 408,932
Northumberland and Durham					
919	Proposed County Road	2.9	County	\$ 662	
920	County Road 18 (part)	4.6	County	11,205	
946	Proposed County Road	4.2	County	972	
947	Colborne to Lakeport Road	2.7	County	4,661	\$ 17,500
Ontario					
959	County Road 4 (part)	7.5	County	\$ 3,654	
960	Proposed County Road	13.4	County	22,038	\$ 25,692
Ottawa-Carleton					
953	Road between Conc. II and III	3.9	Fitzroy	\$ 282	
1015	March-Torbolton Townline	0.7	March, Torbolton	2,438	\$ 2,720

DEPARTMENT OF HIGHWAYS, ONTARIO

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County or Territorial District
Peterborough					
700	North Shore Stoney Lake Road .	6.0	Burleigh and Anstruther	\$ 421,900	
966	Preneveau Road, County Road 50	2.1	County	36,854	
967	County Road 34 (part)	4.0	County	202,091	
968	Twin Lakes to Lasswade Proposed Cty. Road (part)	12.8	County	16,447	
996	County Road 24	4.5	County	292,915	
1025	County Road 12, Fife's Bay Road	3.4	County	14,845	\$ 985,052
Prescott and Russell					
864	County Road 9 (part)	7.9	County	\$ 4,008	
969	County Road 3 (part)	5.6	County	29,329	
985	Road 15A (part)	2.0	County	26,061	
1002	County Road 10A (part)	3.6	County	88,236	
1003	County Road 14 (part)	10.1	County	460,650	
1004	County Road 7 (part)	6.1	County	199,798	
1005	County Road 2 (part)	3.4	County	445,319	
1018	County Road 9 (parts)	5.6	County	478,760	\$ 1,732,161
Prince Edward					
942	County Roads 10 and 18 (part) .	5.5	County	cr. \$ 75	
993	County Road 9 (part)	8.1	County	1,364	
994	County Road 7 (part)	3.8	County	84,760	\$ 86,049
Renfrew					
541	Admaston-Bagot Townline Road .	10.4	Admaston, Bagot and Blythfield	\$ 425	
795	Barry's Bay Road	9.1	Sherwood, Jones and Burns	58,243	
796	Opeongo Road	10.2	Sebastopol	297,470	
897	Opeongo Road (part)	6.0	Grattan	308,179	
980	Ruby Road (part)	1.8	Hagarty and Richards	78,694	
1031	Township Road	0.9	Brudenell and Lyndoch	3,662	\$ 746,673
Simcoe					
760	Tenth Side Road	7.7	Tecumseth	\$ 242,057	\$ 242,057
Stormont, Dundas and Glengarry					
921	County Road 15 (part)	8.9	County	\$ 416,017	
922	County Road 23 (part)	4.8	County	295,762	
923	County Road 12 (part)	7.9	County	114,910	
924	County Road 1 (part)	6.9	County	77,707	
1034	County Road 3 (part)	1.9	County	72,778	
1035	County Road 2 (part)	4.5	County	59,036	
1036	County Road 8 (part)	7.1	County	98,572	
1037	County Road 9 (part)	2.2	County	64,116	
1038	County Road 15 and 6 (parts) . .	3.5	County	64,414	
1039	County Road 20 (part)	2.8	County	95,821	\$ 1,359,133
Victoria					
842	County Road 5 (part)	6.3	County	\$ 34,237	
851	County Road	14.4	County	421,208	
852	Road Westerly from Hwy. 121 . .	2.3	Somerville	1,678	
991	County Road 4 (part)	3.5	County	337,858	
1027	County Road 12	3.0	County	113,595	
1033	County Road 7 (part)	0.5	County	86,791	\$ 995,367

Road Number	Description or Location	Length (miles)	Jurisdiction (Township unless otherwise indicated)	Expenditure	Total by County or Territorial District
Wellington					
834	County Rd. 18 (part) and County Road 20 (part)	7.2	County	\$ 59,436	
986	County Road 34 (part)	4.1	County	32,246	
987	County Road 8 (part)	0.8	County	3,803	
988	County Road 18 (part)	4.0	County	56,156	
989	County Road 7 (part)	3.6	County	62,225	
1022	County Road 14 (part)	10.8	County	155,051	
1032	County Road 24 (part)	2.0	County	108,304	\$ 477,221
Cochrane					
997	The Grenier Road and Glackmeyer-Blount Townline	13.2	Glackmeyer	\$ 97,948	\$ 97,948
Haliburton					
912	Haliburton County Road 1	13.8	County	\$ 596,788	
975	Kawagama Lake Road	4.9	Sherborne, McClintock and Livingstone	325,547	\$ 922,335
Muskoka					
912	Haliburton County Road 1	7.4	County	\$ 315,836	
962	West Road (part), John and Elm Streets	0.4	Huntsville, Town	677	
963	Brunel Road (part)	1.5	Huntsville, Town	150,379	
964	Housey's Rapids-Barkway Road . .	4.4	Gravenhurst, Town	162,823	
1007	Brunel Road (part)	1.0	Huntsville, Town	64,976	\$ 694,691
Parry Sound					
614R	Humphrey Boundary Northerly . .	3.0	Christie	\$ 759	
814	Road between Conc. VIII/IX, opposite Lots 12, 13 and 14 . . .	2.3	Ryerson	41,601	
828	Mill Street	0.3	Powassan, Town	116,588	
974	Cardwell Road (part)	0.5	Rosseau, Village	7,273	
976	McKellar Centre Road (part) . . .	3.1	McKellar	150,235	
977	Eagle Lake Road (part)	7.8	Machar	137,913	
1012	Magnetawan River Bridge	—	Kearney, Town	8,530	\$ 462,899
Sudbury					
714	Birch Creek Bridge	—	Hallam	\$ 1,193	
830	Whitson Creek Bridge	—	Balfour	10,159	
913	Garson-Coniston Road	4.7	Neelon and Garson	201,450	
951	Lee Valley Road (part)	8.0	Hallam	71,212	
1013	Vermilion Lake Road	4.7	Dowling	239,953	
1040	C.P.R. Grade Separation-Monk St.	—	Chapleau	11,326	\$ 535,293
Timiskaming					
809	Blanche River Bridge	0.1	Evanturel	\$ 5,998	
926	Bear Creek Bridge	—	Dymond, Harley	1,296	
1030	Wright Creek Bridge	—	Brethour	15,776	\$ 23,070
Totals		686.2			\$19,404,262

APPENDIX No. 3

Department Expenditure by Highways

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
King's Highways					
2	Quebec Border—Windsor	399.8	\$ 2,949,888	\$ 1,635,492	\$ 4,585,380
2A	Hwy. 401 (M.-C.F.)—Hwy. 2 (Toronto)	1.3	5,234	23,125	28,359
2S	Brockville—Gananoque	24.5	775	55,739	56,514
3	Fort Erie—Windsor	238.3	3,856,416	1,074,597	4,931,013
3A	Hwy. 58 (Welland)—Hwy. 3	9.5	232	38,978	39,210
3C	Fort Erie—Ridgeway	6.8	—	27,910	27,910
4	Port Stanley—Flesherton	130.9	2,440,054	603,344	3,043,398
5	Toronto—Paris	47.1	339,465	654,362	993,827
6	Port Dover—Tobermory	198.8	2,898,452	991,113	3,889,565
7	Ottawa—Sarnia	430.2	8,091,366	2,118,708	10,210,074
7A	Hwy 115—Hwy 12 (Manchester)	30.7	131,440	135,226	266,666
8	Niagara Falls—Goderich [7]	67.7	6,328,736	491,529	6,820,265
8A	Queenston—St. Davids	2.4	93	12,091	12,184
9	Hwy 11—Kincardine	108.0	1,549,259	485,575	2,034,834
10	Port Credit—Owen Sound	83.9	1,172,990	536,979	1,709,969
11	Toronto—Rainy River	1,189.7	9,090,209	4,852,433	13,942,642
11A	Port Arthur—Shabagua Cors.	20.5	709,907	64,828	774,735
12	Whitby—Midland [7]	68.8	199,602	438,431	638,033
14	Bloomfield—Marmora	41.2	945,580	137,383	1,082,963
15	Kingston—Ottawa [7]	71.9	301,982	240,103	542,085
16	Johnstown—Ottawa	52.0	313,893	153,542	467,435
17	Quebec Boundary—Manitoba Boundary	1,240.0	15,216,359	3,555,146	18,771,505
18	Leamington—Windsor	38.4	120,859	171,076	291,935
18A	Kingsville—Hwy. 18	19.4	9,724	44,115	53,839
19	Port Burwell—Tralee	67.9	116,782	406,371	523,153
20	Niagara Falls—Hamilton	40.0	1,283,317	240,932	1,524,249
21	Hwy. 3 (Morpeth)—Owen Sound	176.0	549,268	608,131	1,157,399
22	London—Hwy. 7	27.6	507	88,293	88,800
23	Hwy. 7—Hwy. 9 (Teviotdale)	55.9	543,624	209,242	752,866
24	Port Dover—Collingwood	112.9	483,459	471,295	954,754
24A	Paris—Galt	14.4	89,514	67,154	156,668
25	Oakville—Hwy. 24 (Ospringe Mills)	24.4	16,879	148,802	165,681
26	Barrie—Owen Sound	63.2	1,084,384	435,515	1,519,899
27	Toronto—Penetanguishene	87.4	10,980,941	751,643	11,732,584
28	Port Hope—Bancroft	81.3	1,250,677	346,085	1,596,762
29	Brockville—Arnprior [15]	51.8	6,814	172,188	179,002
30	Brighton—Havelock	28.9	518	100,007	100,525
31	Morrisburg—Ottawa	40.4	15,592	906,090	921,682
32	Gananoque—Hwy. 15	11.3	88	36,618	36,706
33	Kingston—Stirling	73.3	590,497	451,824	1,042,321
34	Hwy. 2 (Lancaster)—Hawkesbury	34.1	8,869	141,859	150,728
35	Hwy. 401 (Newcastle)—Dwight	119.6	2,055,440	487,403	2,542,843
35A	Fenelon Falls—Hwy. 35	2.0	421	6,047	6,468
36	Burleigh Falls—Lindsay	44.1	249,780	152,697	402,477
37	Belleville—Hwy. 7 (Actinolite)	26.9	22,200	128,381	150,581
38	Kingston—Hwy. 7 (N. of Sharbot Lake)	43.6	1,113,525	150,389	1,263,914
40	Chatham—Sarnia	55.6	782,902	148,444	931,346
40A	Kent—Lambton Cty. Bdy.—Hwy. 40				
	Sarnia S. Lts.	8.4	—	8,249	8,249
41	Napanee—Pembroke	131.0	3,238,448	349,340	3,587,788
42	Brockville—Westport [29]	31.3	226,668	95,944	322,162
43	Alexandria—Perth	85.9	107,215	334,715	441,930
44	Hwy. 17—Hwy. 29 (Almonte)	8.6	248	24,874	25,122
45	Cobourg—Norwood	31.4	2,356	104,918	107,274
46	Hwy. 7 (E. of Manilla)—Coboconk	31.6	4,681	79,568	84,249
47	Hwy. 7 (S. of Greenbank—				
	Hwy. 48 (Ringwood)	17.8	232,560	122,205	354,765
48	Toronto—Hwy. 46 (Bolsover) [12]	56.9	311,377	381,266	692,643
49	Pictou—Hwy. 2 (W. of Deseronto) [2]	13.9	114,981	52,682	167,663
50	Toronto—Hwy. 9 (N. of Palgrave)	18.5	1,104,419	124,659	1,229,078
51	Rondeau Prov. Park Jct. Twp. Rd.—				
	Jct. Hwy. 3	3.6	79,120	9,535	88,655

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
52	Hwy. 2 (W. of Duffs. Cor.)— Wentworth City Line	15.4	46,771	60,185	106,956
53	Hamilton—Hwy. 2 (Eastwood)	23.8	2,453	227,097	229,550
54	Cayuga—Cainsville	24.7	7,166	116,521	123,687
55	Jct. Hwy. 8 to Niagara	8.0	—	65,573	65,573
56	Hwy. 3 (Canfield)—Hwy. 20 (E. of Elfrida)	14.6	2,718	72,975	75,693
57	Hwy. 3A—Bismarck	8.9	114	35,774	35,888
58	Port Colborne—St. Catharines	14.5	354,830	216,571	571,401
59	Long Point—Hwy. 3 (E. of Tillsonburg)	64.3	51,564	253,670	305,234
60	Hwy. 17 (W. of Renfrew)—Huntsville	146.8	953,361	403,258	1,356,619
61	International Border—Thunder Bay ..	36.6	267,668	78,695	346,363
62	Hwy. 14 (N. of Belleville)—Pembroke ..	146.0	962,559	416,122	1,378,681
63	North Bay—Quebec Border	36.5	35,663	139,342	175,005
64	Sturgeon Falls—Hwy. 11	80.9	1,048,450	246,915	1,295,365
65	Quebec Border—Matachewan	79.9	644,494	192,932	837,426
66	Quebec Border—Hwy. 65 (E. of Matachewan)	60.9	226,611	467,379	693,990
67	Hwy. 101 (S. of Barbers Bay)— Iroquois Falls	20.7	19,010	56,929	75,939
68	South Baymouth—Hwy. 17 (N. of Espanola)	78.6	1,291,025	263,103	1,554,128
69	Hwy. 12 (N. of Brechin)—Capreol ..	196.5	1,883,936	929,101	2,813,037
70	Springmount—Hepworth	9.1	57	29,297	29,354
71	Fort Frances—Hwy. 17 (E. of Kenora) ..	97.9	1,553,140	208,192	1,761,332
72	Hwy. 17 (Dinorwic)—Sioux Lookout ..	42.2	261,134	67,858	328,992
73	Port Bruce—Dorchester	23.6	2,067	71,682	73,749
74	Hwy. 3 (New Sarum)—Nilestown	13.2	1,564	71,009	72,573
76	Hwy. 3 (Eagle)—Hwy. 2	11.3	177	27,173	27,350
77	Leamington—Hwy. 401 (N. of Comber) ..	14.0	20,957	33,008	53,965
78	Hwy. 21 (Dresden)—Wallaceburg	9.5	424cr.	30,694	30,270
79	Hwy. 2 (Bothwell)—Hwy. 7	28.5	1,308cr.	116,307	114,999
80	Hwy. 2 (S. of Glencoe)—Courtright ..	42.4	444,166	106,361	550,527
81	Delaware—Grand Bend	38.0	86,850	117,988	204,838
82	Hwy. 7 (Thedford)—Hwy. 21	5.5	405cr.	18,733	18,328
83	Russeldale—Hwy. 21 (N. of Grand Bend)	24.1	259cr.	66,115	65,856
84	Hensall—St. Joseph	10.7	295cr.	29,084	28,789
85	Kitchener—Elmira	11.3	487cr.	26,963	26,476
86	Guelph—Amberley	78.9	102,391	267,157	369,548
87	Harriston—Hwy. 86 (Bluevale)	19.7	800cr.	63,291	62,491
88	Bradford—Hwy. 27 (Bond Head)	5.0	43	26,952	26,995
89	Hwy. 400—Hwy. 23 (E. of Palmerston) ..	63.7	870,246	244,377	1,114,623
90	Barrie—Angus	10.0	21	56,678	56,699
91	Stayner—Duntroon	5.0	1,320	18,629	19,949
92	Elmvale—Wasaga Beach	7.8	488	34,330	34,818
93	Hwy. 11 (E. of Barrie)—Waverley	17.5	408	85,977	86,385
94	Callander—Hwy. 17 (S. of North Bay) ..	5.8	105,556	25,645	131,201
95	Hornes Point—Wolfe Is.	7.1	38	40,118	40,156
96	Quebec Head—W. end of Wolfe Is. ..	20.4	10,854	130,004	140,858
97	Hwy. 6 (Freelton)—Hickson	39.0	8,306	198,426	206,732
98	Blenheim—Windsor	28.3	54,451	64,845	119,296
99	Dundas—Hwy. 24 (N. of Brantford) ..	15.9	218,756	63,441	282,197
101	Quebec Border—Hwy. 17 (Wawa) ..	288.8	1,482,619	644,902	2,127,521
103	Port Severn—Hwy. 69	29.9	2,823	105,016	107,839
104	Hwy. 9—Grand Valley	1.8	64cr.	4,739	4,675
105	Hwy. 17—Red Lake	110.5	271	167,875	168,146
106	Hwy. 28 (Dale)—Hwy. 2 (Welcome) ..	2.6	—	12,908	12,908
108	Hwy. 17—Hwy. 639 (Quirke Lake) ..	26.0	42,569	71,241	113,810
112	Hwy. 11—Hwy. 66 (Swastika)	12.4	167	50,016	50,183
114	Hwy. 3 (Maidstone)—Hwy. 98	1.2	5,596	—	5,596
115	Newcastle—Peterborough [35]	17.1	7,510	267,299	274,809
116	Hwy. 72 (Patricia)—Hudson	10.6	381,659	16,832	398,491
117	Merto N. Lts.—Hwy. 7	1.3	151cr.	14,039	13,888
118	Dorset—Hwy. 69	44.9	490,709	123,974	614,683
119	Hwy. 17 (Dryden)—Richan	13.9	5,968	38,153	44,121
121	Hwy. 28—Hwy. 35 (S. of Fenelon Falls) ..	79.8	48,342	234,621	282,963
122	Oakville—Q.E.W. (N. of Clarkson) ..	5.1	67,239	1,899	69,138

DEPARTMENT OF HIGHWAYS, ONTARIO

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
123	Hwy. 11—North Bay Airport	4.5	—	1,306	1,306
124	Hwy. 69 (N. of Parry Sound)— Sundridge	52.8	619,665	174,140	793,805
125	Hwy. 105—Red Lake	9.2	15,532	12,786	28,318
126	Hwy. 401—Hwy. 2 (London)	3.2	8,357	22,465	30,822
127	Maynooth—Hwy. 60 (E. of Whitney)	23.9	1,347	63,581	64,928
128	Kenora—Redditt	17.3	44,241	43,228	87,469
129	Thessalon—Chapleau	137.7	419,845	442,127	861,972
130	Port Arthur—Hwy. 61	11.0	26,561	24,641	51,202
132	Renfrew—Hwy. 41	17.5	37,880	58,327	96,207
133	Hwy. 33 (Millhaven)—Hwy. 401	6.3	44	19,603	19,647
135	Hwy. 401—Hwy. 2 (London)	3.8	14	11,071	11,085
136	Hwy. 24—Orangeville	7.3	709cr.	45,563	44,854
137	Hwy. 401—Thousand Island Bridge	1.9	—	10,245	10,245
138	Cornwall—Monkland	11.1	170,723	33,243	203,966
140	Hwy. 3 (Port Colborne)—Hwy. 20	—	130,525	—	130,525
144	Sudbury—Hwy. 101	166.4	2,128,314	548,366	2,676,680
400	Toronto—Hwy. 12 (Coldwater)	75.3	324,562	869,774	1,194,336
401	(M.-C.F.) Quebec Border—Windsor	514.6	24,745,312	5,411,064	30,156,376
402	Hwy. 7—Blue Water Bridge	3.7	1,335,861	25,050	1,360,911
403	Burlington—Brantford	20.9	621,587	288,319	909,906
404	Toronto—Hwys. 7 and 12	—	5,090	—	5,090
405	Q.E.W.—International Bridge (Queenston)	5.3	27,286	57,788	85,074
406	Hwys. 20 and 58—Q.E.W.	5.2	2,412,815	57,401	2,470,216
407	Hwys. 35 and 115—Hwy. 27	—	348,795	—	348,795
416	Johnstown—Ottawa	—	2,848,671	—	2,848,671
417	Quebec Border—County Rd. 9 (West of Ottawa)	—	5,766,475	—	5,766,475
427	Hwy. 401—Steeles Ave.	—	1,592,788	—	1,592,788
Q.E.W.	Toronto—Fort Erie	95.0	19,672,648	1,509,006	21,181,654
Total Expenditure Allocated to King's Highways			\$160,717,477	\$ 44,949,824	\$205,667,301

Secondary Highways

500	Denbigh—Bancroft	37.2	\$ 872,461	\$ 112,363	\$ 984,824
501	Hwy. 103—Honey Harbour	8.0	1,701	64,445	66,146
502	Napanee—Marysville	7.4	5,127	28,286	33,413
503	Tory Hill—Kirkfield	76.2	280,278	213,733	494,011
504	Hwy. 620—Apsley	16.3	11,496	59,767	71,263
505	Hwy. 46—Uphill	11.8	1,209	33,134	34,343
506	Plevna—Hwy. 41	20.5	3,262	52,085	55,347
507	Hwy. 28 (Lakefield)—Hwy. 503	37.7	183,152	119,254	302,406
508	Barnstow—Black Donald Mines	20.7	203,317	44,528	247,845
509	Hwy. 7—Snow Road Station	12.1	—	43,603	43,603
510	Magnetawan—Hwy 124	1.9	—	5,312	5,312
511	Brightside—Hwy 508	21.4	1,564	46,206	47,770
512	Eganville—Hwy 60	29.3	117,416	79,694	197,110
513	Hwy 132—East of Hyndford	9.8	—	31,159	31,159
514	Hwy 60—Interlaken	10.0	3,635	38,064	41,699
515	Hwy 512—Combermere	28.0	52,438	109,896	162,334
516	Port Sydney—Windermere	15.9	310,928	52,020	362,948
517	Twp. Rd. (Near New Carlow)—Hwy 62	10.4	—	37,020	37,020
518	Sand Lake—Hwy 69	54.4	15,380	215,192	230,572
519	Hwy 121—Redstone Lake	33.3	18,241	153,160	171,401
520	Burk's Falls—Ardbeg	31.8	140,183	107,051	247,234
522	Hwy 11—West of Loring	48.9	109,075	117,079	226,154
523	Lyell Twp. Line—Hwy. 60	13.5	1,204	41,847	43,051
524	Hwy 522—Hwy 534 (E. of Restoule)	3.1	—	10,073	10,073
525	Gravenhurst—Muskoka Lake	1.5	—	4,215	4,215
526	Hwy 69—West of Britt	2.3	215	8,899	9,114
527	Baysville—Huntsville	14.5	121,692	98,156	219,848
528	Wolsley Bay—Hwy 64	8.3	—	29,621	29,621
528A	Pine Cove Landing—Hwy 528	3.3	—	10,760	10,760
529	Hwy 69—Hwy 69 (Magnetawan R.)	15.7	1,464	42,949	44,413
529A	Hwy 529—Bayfield Wharf	3.0	—	11,563	11,563
530	Hwy 519—Hwy 35 (Carnarvon)	11.6	130,068	53,226	183,294
531	Bonfield—Hwy 17	2.3	—	10,014	10,014

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
532	Hwy 11 (S. of Bracebridge)—Hwy 69	40.1	10,290	125,181	135,471
533	Mattawa—Hwy 63	31.6	61,733	101,772	163,505
534	Powassan—Restoule	21.9	19,896	69,785	89,681
535	Hwy. 64—Rivière Veuve	29.9	169,814	106,489	276,303
536	Hwy. 17—Creighton	3.8	—	10,311	10,311
537	Hwy. 69—Hwy. 17 (Wahnapiatae)	11.8	14,984	56,328	71,312
538	Algoma Mines Loop	4.1	—	12,288	12,288
539	Hwy. 64—Warren	24.3	169,023	110,180	279,203
539A	Hwy. 539—Tertiary Rd. 805	.8	—	2,337	2,337
540	Little Current—Meldrum Bay	86.6	94,152	270,150	364,302
540A	Hwy. 540—Barrie Island	2.5	—	19,383	19,383
541	Sudbury—Skead	14.5	64,293	42,416	106,709
541A	Falconbridge—Hwy. 541	1.9	8,100	5,156	13,256
542	Hwy. 68—Gore Bay	44.6	116,732	164,102	280,834
542A	Hwy. 542—Tehkummah	1.5	—	5,326	5,326
543	Long Lake—Sudbury	4.7	65,658	13,591	79,249
544	Levack—Hwy. 144	1.7	—	4,687	4,687
545	Hwy. 541—Milnet	16.5	661	45,897	46,558
546	Hwy. 17—Mississagi Prov. Park	47.8	62,748	337,346	400,094
547	Hwy. 101—Hawk Jct.	3.8	—	9,376	9,376
548	Hilton Beach—Hwy. 17	45.6	198,734	129,998	328,732
549	Lake Panache—Hwy. 17	8.6	47,426	40,695	88,121
550	Sault Ste. Marie—Gross Cap	6.5	11,512	16,927	28,439
551	Providence Bay—Hwy. 540	13.9	6,889	69,619	76,508
552	Hwy. 556—Twp. Rd. (E. of Hwy. 17)	11.6	50	35,015	35,065
552A	Hwy. 552—Hwy. 17	1.0	—	2,467	2,467
553	Massey—Richie Falls Camp	48.7	892	161,229	162,121
554	Hwy. 546—Hwy. 129	11.0	135,101	74,520	209,621
555	Magog Lake—Hwy. 557	7.0	—	35,625	35,625
556	Hwy. 17 (Heyden)— Christina Mine Road	26.3	65,077	113,379	178,456
557	Blind River	12.6	—	62,338	62,338
558	Haileybury—Montreal River	16.0	—	38,692	38,692
559	Hwy. 69 (Nobel)—Hwy. 69	13.0	—	36,405	36,405
560	Hwy. 11—Hwy. 144 (S. of Gogama)	120.9	73,033	284,394	357,427
560A	Westree—Hwy. 560	6.2	—	13,672	13,672
561	Bruce Mines—Hwy. 638	13.5	41,470	37,197	78,667
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	9.0	7,687	29,251	36,938
563	Batchawana—Hwy. 17	3.4	—	8,390	8,390
564	Blanche R. Br.—Hwy. 112	6.6	—	12,508	12,508
565	Pte. Aux Pins—Hwy. 550	1.0	—	2,679	2,679
566	Matachewan—Ashley Mine	16.4	—	31,486	31,486
567	E. of Silver Centre—N. Cobalt	20.2	506	44,297	44,803
568	Hwy. 11—Kenogami	1.0	—	2,041	2,041
569	Hwy. 11—Hwy. 11 (S. of Englehart)	17.5	1,893	84,481	86,374
570	Sesekinika—Hwy. 11	1.9	—	4,185	4,185
571	Hwy. 562—Earlton	3.6	—	11,778	11,778
572	Hwy. 11 (Ramore)—Hwy. 101	10.3	16,438	29,793	46,231
573	Charlton—Hwy. 11	12.0	50,222	25,341	75,563
574	Twp. Rd. (S. of Norembega)— Hwy. 579	18.0	22,769	81,249	104,018
576	Hwy. 101—Kam-Kotia Mine	15.5	5,135	34,298	39,433
577	Hwy. 101—Iroquois Falls	14.6	71,578	40,332	111,910
578	Iroquois Falls—Hwy. 11	5.1	417,794	14,921	432,715
579	Cochrane—Gardiner	21.8	—	128,157	128,157
580	Hwy. 11—Lake Nipigon	7.7	—	10,897	10,897
581	Hwy. 11—Remi Lake	3.3	—	6,347	6,347
582	Hurkett—Hwy. 17	4.0	—	7,342	7,342
583	Mead—Lac Ste. Therese	30.1	35,561	138,114	173,675
584	Hardrock Mine—Nakina	42.3	55,377	54,938	110,315
584A	Hwy. 11—Hwy. 584	2.4	—	3,061	3,061
585	Hwy. 11—Pine Portage	22.9	2,839	57,065	59,904
586	Hwy. 11—Lower Shebandowan Lake	3.3	—	5,394	5,394
587	Silver Islet—Hwys. 11 and 17	26.0	3,157	61,093	64,250
588	Stanley—Round Lake Road	34.8	214,215	89,243	303,458
589	Hwys. 11A and 17A—Dog Lake Road	18.7	199,876	52,135	252,011
590	Hwy. 130—Hwy. 588 (Nolalu)	25.1	93,595	50,775	144,370
591	Hwy. 589 Northerly	4.9	—	22,784	22,784

DEPARTMENT OF HIGHWAYS, ONTARIO

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
592	Hwy. 11 (Novar)—Hwy. 11	10.2	—	29,308	29,308
593	Hwy. 61—Hwy. 588 (Nolalu)	29.9	—	60,421	60,421
594	Dryden—Hwy. 17	20.6	29,949	46,940	76,889
595	Hwy. 597—Hwy. 590	25.3	—	66,943	66,943
596	Kenora—N. of Minaki	29.6	—	112,237	112,237
597	Pardee—Hwy. 608	9.5	10,785	16,783	27,568
598	Hwy. 604—Hwy. 128 (N. of Kenora)	2.7	67,021	4,590	71,611
599	Ignace—Tertiary Rd. 808	187.4	880,486	214,069	1,094,555
600	Hwy. 71—Rainy River	53.9	—	100,733	100,733
601	Hwy. 17—Dryden	15.0	462	66,056	66,518
602	Fort Francis—Emo	29.1	5,487	45,868	51,355
603	Hwy. 17—Dymont	2.8	—	12,063	12,063
604	Hwy. 17—Kenora Airport	5.5	150	8,836	8,986
605	Hwy. 17—Rugby Lake	7.7	—	14,693	14,693
606	Hwy. 17—Markstay	1.0	—	2,812	2,812
607	Hwy. 69 (Big Wood)—Hwy. 64	5.9	—	20,002	20,002
607A	French River—Hwy. 607	1.5	—	5,348	5,348
608	Hwy. 61—Hwy. 595 (S. Gillies)	11.9	31,286	33,264	64,550
609	Hwy. 105—Clay Lake	10.1	—	18,387	18,387
610	Hwy. 67—Hwy. 101 (Hoyle)	13.3	—	31,483	31,483
611	Hwy. 602—Burriss/Miscampbell Twp. Line	12.5	—	19,022	19,022
612	Hwy. 103 (Mactier)—Hwy. 69	7.0	—	19,541	19,541
613	Hwy. 602—Lake Despair	25.5	90,848	72,126	162,974
614	Hwy. 17—Manitouwadge	36.4	92,770	89,816	182,586
615	Hwy. 17—Buroitt Lake	13.6	—	20,391	20,391
616	Hwy. 101—Palomar	2.0	—	3,774	3,774
617	Hwy. 11 (Stratton)—Hwy. 600	14.4	—	25,727	25,727
618	Red Lake—Madsen	7.3	—	10,704	10,704
619	Hwy. 11 (Pinewood)—Hwy. 621	25.3	149	38,152	38,301
620	Hwy. 62—Hwy. 28 (Apsley)	25.4	702,660	76,132	778,792
620A	Hwy. 620—Hwy. 28	.3	—	729	729
621	Hwy. 11—Lake of the Woods	32.8	2,363	44,872	47,235
622	Hwy. 11 (Atikokan) Northerly	6.8	400	8,978	9,378
623	Hwy. 11—Sapawe	3.1	—	4,242	4,242
624	Hwy. 11—Larder Lake	26.3	92,564	66,297	158,861
625	Caramat—Hwy. 11	20.0	23,255	108,808	132,063
626	Matheson—Porquis Jct.	20.1	452,863	48,642	501,505
627	Heron Bay—Hwy 17	5.2	—	12,830	12,830
628	Red Rock—Hwys. 11 and 17	4.4	—	9,601	9,601
629	Timmins—Timmins Airport	6.3	245,571	14,824	260,395
630	Kiosk—Hwy. 17	18.0	19,182	47,974	67,156
631	S. of Hornepayne—Hwy. 11	83.5	1,228,811	230,724	1,459,535
632	Hwy. 118—Rosseau	17.1	—	94,331	94,331
633	Hwy. 11—Kawene	3.7	—	4,708	4,708
634	Val Caron—Hwy. 144	11.2	—	37,139	37,139
635	Hwy. 17—Ottawa River Bridge	1.6	—	5,369	5,369
636	Hwy. 11—Frederick House	3.0	362	14,026	14,388
637	Hwy. 69—Killarney	41.8	32,609	198,471	231,080
638	Dunns Valley—Echo Bay	23.9	5,692	76,420	82,112
639	Hwy. 108—Hwy. 546	14.3	—	62,418	62,418
640	Hwy. 571—Earlton Airport Entrance	1.7	—	3,365	3,365
641	Hwy. 17—Pellatt	8.4	43,488	20,689	64,177
642	Alcona—Sioux Lookout	11.3	—	21,802	21,802
643	Hwy. 584—Twp. Rd. to Cavell	12.0	1,918	15,949	17,867
644	Hwy. 69 (Pte. Au Baril) Easterly	.6	56	2,200	2,256
645	Hwy. 529—Bing Inlet	2.5	232	9,597	9,829
646	Pickle Crow—Central Patricia	6.7	620,395	3,090	623,485
647	Hwy. 17—Blue Lake Prov. Park	5.5	6,348	9,034	15,382
648	Dyno Mine—W. Jct. Hwy. 121	23.5	774	52,370	53,144
649	Bobcaygeon—Hwy. 121	10.9	200	32,034	32,234
650	O.N.R. Right of Way—Hwy. 112	4.7	—	11,429	11,429
651	Hwy. 101—Missanabie	31.8	4,255	78,465	82,720
652	Wade Lake—Hwy. 574	11.0	—	56,840	56,840
653	Portage Du Forte Br.—Hwy. 17	5.5	—	17,774	17,774
654	Hwy. 11—Nipissing	14.1	77,912	38,476	116,388
655	Timmins—Ward Kidd Twp. Bdry.	13.4	—	34,427	34,427
656	Hwy. 533 Northerly	2.6	—	4,338	4,338

Hwy. No.	Location	Mileage	Construction	Maintenance	Total
657	Goldpines—Hwy. 105	3.7	—	4,129	4,129
658	Hwy. 17—Fairbank Prov. Park	12.2	—	41,233	41,233
659	Hwy. 604—Hwy. 128	12.3	—	22,394	22,394
660	Bala—Hwy. 103	11.4	166,085	42,396	208,481
661	Gogama—Hwy. 144	3.4	49,907	7,167	57,074
Total Expenditure Allocated to Secondary Highways			\$ 10,209,711	\$ 8,799,844	\$ 19,009,555
Tertiary Roads					
800	Hwys. 11 and 17—Cheeseman Lake	63.5	\$ 14,036	\$ 78,533	\$ 92,569
801	Hwy. 11—Namewanikan River	8.8	5,243	4,946	10,189
802	Hwy. 11—Burchell Lake	8.5	—	1,066	1,066
803	Hwy. 575	3.0	—	4,932	4,932
804	Hwy. 105—Lower Manitou Falls	12.8	—	7,820	7,820
805	Hwy. 539A (River Valley)—Pond Lake	35.0	2,448	73,525	75,973
806	Hwy. 545—Sellwood	4.2	—	11,503	11,503
807	Smooth Rock Falls—Fraserdale	44.0	24,207	134,895	159,102
808	Hwy. 646—Otoskwin River	36.0	—	17,532	17,532
809	From Hwy. 564 to End of Highway	3.2	—	5,261	5,261
Total Expenditure Allocated to Tertiary Roads			\$ 45,934	\$ 340,013	\$ 385,947
Access and Industrial Roads					
Caramat—Manitowadage			\$ —	\$ 21,726	\$ 21,726
E. A. Wicks Rd.			—	3,799	3,799
Sherman Mine Industrial Road			—	1,409	1,409
Moosonee S'ly—Kwataohegan Rvr.			39,662	—	39,662
Total Expenditure Allocated to Access and Industrial Roads			\$ 39,662	\$ 26,934	\$ 66,596
Unincorporated Township Roads					
Statute Labour Board			\$ 84,724	\$ 219,791	\$ 304,515
Local Road Board			765,123	1,160,468	1,925,591
Special—Settlers			86,928	56,006	142,934
Indian Reserves			—	21,988	21,988
Total Expenditure Allocated to Unincorporated Township Roads			\$ 936,775	\$ 1,458,253	\$ 2,395,028
Other Programs:					
Belfield Expressway			\$ 2,081,058	\$ —	\$ 2,081,058
Brantford Expressway			1,395,254	—	1,395,254
MacDonald-Cartier Bridge (Ottawa)			9,359	—	9,359
E. C. Row Expressway (Windsor)			3,724,305	—	3,724,305
International Airport Road (Metro Toronto)			352cr.	22,024	21,672
Main Street East Tunnel (Welland)			4,941,613	—	4,941,613
Queensway (Ottawa)			93,953	305,159	399,112
Thorold Tunnel			79,316	—	79,316
St. Thomas By-Pass			97,015	—	97,015
Connecting Links			8,703,839	773,041	9,476,880
Development Roads			19,106,323	297,938	19,404,261
Ferries			5,568	1,037,349	1,042,917
Lands and Buildings			427,425	63,895	491,320
Sidewalks			45,953	—	45,953
Weigh Scales			6,711	14,359	21,070
Total Expenditure Allocated to Other Programs			\$ 40,717,340	\$ 2,513,765	\$ 43,231,105
Highway Totals			\$212,666,899	\$ 58,088,633	\$270,755,532
Sundry Unallocated, District Office Administration, Engineering, Building, Inventory Charges, Etc.			\$ 1,910,535	\$ 13,538,752	\$ 15,449,287
Total Expenditure			\$214,577,434	\$ 71,627,385	\$286,204,819

Summary
(Government Subsidy)

	Roads		Bridges and Culverts
	Construction	Maintenance	Construction
Brant	\$ 543,744	\$ 187,086	\$ 401,935
Bruce	682,007	219,041	226,572
Dufferin	301,240	176,921	84,554
Elgin	832,085	316,056	384,337
Essex	1,101,601	403,496	296,637
Frontenac	584,749	232,583	84,699
Grey	611,654	495,759	235,871
Haldimand	724,810	132,527	105,899
Haliburton	3,099	276	—
Halton	1,346,209	345,117	28,357
Hastings	500,595	233,969	116,969
Huron	626,502	424,107	268,022
Kent	1,171,518	314,662	105,377
Lambton	1,510,651	332,366	325,253
Lanark	378,711	246,700	37,731
Leeds and Grenville	608,178	281,897	115,249
Lennox and Addington	184,896	181,767	14,546
Middlesex	1,386,682	420,556	510,360
Norfolk	881,772	407,894	199,003
Northumberland and Durham	1,389,701	239,056	213,772
Ontario	1,649,363	613,105	225,151
Oxford	667,010	355,258	178,220
Peel	2,630,615	487,390	274,694
Perth	568,149	279,647	93,865
Peterborough	652,495	269,599	139,459
Prescott and Russell	404,372	217,818	251,565
Prince Edward	235,170	155,711	27,354
Renfrew	635,827	250,558	178,741
Simcoe	1,148,318	352,527	253,189
Stormont, Dundas and Glengarry	872,713	430,452	80,934
Victoria	316,124	373,755	305,285
Waterloo	646,841	524,979	455,952
Wellington	650,989	509,691	3,859
Wentworth	933,639	273,741	325,692
York	3,226,687	499,182	360,983
Regional Municipality of Niagara	1,545,726	1,112,418	365,244
Regional Municipality of Ottawa-Carleton	2,721,085	1,472,562	350,734
Total	\$34,875,527	\$13,770,229	\$ 7,626,064
Metropolitan Toronto			
Roads	18,869,528	4,886,702	92,977
Subway	17,192,380	—	—
Total	\$70,937,435	\$18,656,931	\$ 7,719,041

Expenditures

70-1971 Fiscal Year)

Winter Control Expenditure	Approved Expenditure			Government Subsidy 50% and 80%
	Construction	Maintenance	Total	
62,801	\$ 945,679	\$ 253,057	\$ 1,198,736	\$ 722,751
150,314	908,579	370,120	1,278,699	710,143
70,708	385,794	252,110	637,904	346,984
93,261	1,216,422	422,244	1,638,666	939,325
81,008	1,398,238	495,513	1,893,751	1,040,620
126,265	669,448	379,835	1,049,283	557,216
237,901	847,525	750,747	1,598,272	877,189
41,568	830,709	178,536	1,009,245	539,164
—	3,099	276	3,375	5,250
128,205	1,374,566	475,394	1,849,960	936,078
72,600	617,564	329,285	946,849	517,309
155,310	894,524	585,502	1,480,026	823,674
92,891	1,276,895	508,015	1,784,910	955,557
64,791	1,835,904	401,373	2,237,277	1,217,968
124,456	416,442	378,985	795,427	412,713
106,846	723,427	410,729	1,134,156	609,861
55,974	199,443	238,188	437,631	224,674
158,485	1,897,042	585,798	2,482,840	1,397,002
11,319	1,080,775	432,717	1,513,492	820,498
194,072	1,603,473	440,798	2,044,271	1,088,830
260,584	1,874,514	891,508	2,766,022	1,458,162
117,371	845,230	492,894	1,328,124	730,484
215,524	2,905,309	720,030	3,625,339	1,902,983
63,539	662,014	347,546	1,009,560	535,347
91,394	791,954	362,860	1,154,814	620,967
60,303	655,937	390,855	1,046,792	604,345
67,660	262,524	223,544	486,068	252,675
98,629	814,568	358,885	1,173,453	645,293
30,155	1,401,508	595,123	1,996,631	1,080,957
40,154	953,648	597,685	1,551,333	811,003
47,885	621,409	526,722	1,148,131	668,658
52,544	1,102,793	715,873	1,818,666	1,057,807
77,384	654,847	699,501	1,354,348	688,588
22,477	1,259,331	479,041	1,738,372	971,589
39,061	3,587,670	1,108,279	4,695,949	2,465,262
74,943	1,910,970	1,663,588	3,574,558	2,239,095
16,780	3,071,818	2,999,526	6,071,344	3,037,925
15,162	\$42,501,592	\$21,062,682	\$63,564,274	\$34,513,946
6,990	18,962,505	8,500,000	27,462,505	13,731,252
—	17,192,380	—	17,192,380	8,596,190
2,152	\$78,656,477	\$29,562,682	\$108,219,159	\$56,841,388



As sand fill and grading operations proceeded on Highway 599 in the Thunder Bay district, above, paving continued north of Gogama on a stretch of Highway 144 which was opened to traffic in September, 1970.



APPENDIX No. 5

Mileage of Urban Road Surfaces at the End of 1970
Roads under Local Authority

Counties	Legally open	Earth graded and drained	Gravel or stone	Light bituminous	Asphalt concrete	Cement concrete	Other	Total
Brant	—	—	37.8	61.4	89.6	16.9	—	205.7
Bruce	10.6	8.0	50.2	60.0	31.4	—	—	160.2
Dufferin	1.0	1.2	9.5	0.5	24.0	1.7	—	37.9
Elgin	12.0	1.4	18.1	52.2	50.3	2.3	1.2	137.5
Essex	18.2	24.0	77.6	99.8	208.4	304.5	4.0	736.5
Frontenac	0.3	0.7	—	15.2	90.5	0.3	—	107.0
Grey	0.5	7.3	33.3	87.7	33.9	2.3	—	165.0
Haldimand	13.3	3.7	23.3	22.6	18.9	—	—	81.8
Halton	39.6	—	135.1	268.8	214.2	7.6	—	665.3
Hastings	0.5	4.1	20.2	96.7	25.8	0.7	—	148.0
Huron	2.5	3.0	53.2	38.6	32.3	—	—	129.6
Kent	10.7	1.2	30.4	34.0	156.7	3.3	—	236.3
Lambton	8.7	1.4	68.3	73.0	91.3	8.3	—	251.0
Lanark	27.9	0.3	22.5	24.4	44.4	0.8	—	120.3
Leeds and Grenville	4.5	4.0	18.7	29.0	81.0	4.8	—	142.0
Lennox and Addington	0.2	—	4.1	16.6	5.8	—	—	26.7
Middlesex	16.9	0.3	30.9	294.7	238.5	0.9	—	582.2
Norfolk	2.2	3.2	14.9	45.6	26.3	0.7	—	92.9
Northumberland and Durham	14.1	2.7	44.0	81.4	71.5	4.9	—	218.6
Ontario	23.3	2.0	90.4	113.0	196.8	—	—	425.5
Oxford	3.6	0.8	22.6	58.7	75.4	0.3	—	161.4
Peel	10.7	14.8	60.7	156.3	248.0	—	—	490.5
Perth	10.3	1.3	47.6	56.5	54.0	0.7	—	170.4
Peterborough	10.8	0.5	28.7	80.3	77.2	2.3	—	199.8
Prescott and Russell	3.2	3.0	11.0	13.1	32.4	—	—	62.7
Prince Edward	—	—	2.4	7.6	11.6	0.2	—	21.8
Renfrew	1.5	5.1	43.8	46.5	75.2	—	—	172.1
Simcoe	17.9	12.3	79.2	148.8	150.8	6.5	—	415.5
Stormont, Dundas and Glengarry	2.2	—	28.8	58.0	53.7	18.0	18.0	178.7
Victoria	14.3	0.7	47.8	3.0	31.6	—	—	97.4
Waterloo	16.8	8.5	37.1	213.7	260.6	36.7	—	573.4
Wellington	12.2	3.2	55.5	92.5	137.9	2.7	—	304.0
Wentworth	10.5	—	10.8	136.7	419.5	1.6	—	579.1
York	2.5	2.9	12.2	49.0	86.7	—	—	153.3
Total Counties	323.5	121.6	1,270.7	2,635.9	3,446.2	429.0	23.2	8,250.1
Metro Toronto Area	4.5	—	6.6	—	516.6	5.8	1.3	534.8
Ottawa-Carleton Region	3.6	8.2	25.8	171.8	218.5	1.6	—	429.5
Niagara Region	229.6	148.1	502.0	735.0	327.2	72.6	—	2,014.5
Districts								
Algoma	37.0	4.9	107.3	31.2	132.6	0.3	—	313.3
Cochrane	33.9	7.7	59.5	25.8	55.1	—	—	182.0
Kenora	—	—	55.4	7.9	40.4	0.1	—	103.8
Manitowlin	3.3	2.8	14.8	1.5	—	—	—	22.4
Muskoka	22.1	0.4	38.8	26.6	7.5	—	—	95.4
Nipissing	10.1	7.5	91.6	66.1	101.2	—	—	276.5
Parry Sound	29.2	0.2	32.8	2.2	15.6	—	—	80.0
Rainy River	—	0.9	30.7	13.3	18.6	0.1	0.4	64.0
Sudbury	13.2	3.8	48.0	75.2	165.3	0.3	—	305.8
Temiskaming	—	—	31.4	2.2	21.7	—	—	55.3
Thunder Bay	4.9	1.4	234.8	11.0	173.1	1.3	—	426.5
Total Districts	153.7	29.6	745.1	263.0	731.1	2.1	0.4	1,925.0
Grand Totals	714.9	307.5	2,550.2	3,805.7	5,239.6	511.1	24.9	13,153.9

COUNTY ROADS						
Counties	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete
Brant	—	—	16.1	91.3	29.5	—
Bruce	—	—	66.5	124.2	103.3	—
Dufferin	—	—	78.9	19.4	49.0	—
Elgin	—	—	64.6	162.6	63.1	7.4
Essex	—	—	81.4	66.1	100.1	2.2
Frontenac	—	—	34.2	60.0	74.0	—
Grey	—	—	211.2	128.1	50.9	0.4
Haldimand	0.3	3.2	8.7	161.9	17.3	—
Haliburton	9.2	—	5.0	—	—	—
Halton	—	—	32.8	73.6	54.4	—
Hastings	—	—	139.4	72.3	44.2	2.1
Huron	—	—	158.2	77.3	111.4	—
Kent	—	—	21.5	10.8	363.0	6.6
Lambton	—	—	172.9	128.1	604.2	8.9
Lanark	—	—	109.1	120.0	—	—
Leeds and Grenville	—	—	117.5	129.0	132.8	—
Lennox and Addington	—	—	—	134.7	37.1	—
Middlesex	4.8	—	95.0	125.2	207.3	14.4
Norfolk	0.3	9.0	12.4	195.7	33.2	1.0
Northumberland and Durham	—	—	—	171.9	122.2	0.5
Ontario	—	—	42.0	68.8	192.1	—
Oxford	—	—	76.4	109.0	49.8	11.6
Peel	—	—	—	68.6	108.8	—
Perth	—	—	40.7	98.9	84.3	—
Peterborough	—	—	86.5	53.7	94.0	—
Prescott and Russell	—	—	92.8	92.1	119.3	—
Prince Edward	—	—	20.2	127.2	49.0	—
Renfrew	—	—	7.3	17.9	190.8	—
Simcoe	—	—	84.0	65.9	176.9	—
Stormont, Dundas and Glengarry	—	—	95.7	211.8	122.7	—
Victoria	—	—	101.3	46.1	56.6	—
Waterloo	—	—	40.0	77.4	142.2	2.8
Wellington	—	0.9	128.1	81.9	104.9	—
Wentworth	—	—	1.3	167.7	7.0	—
York	—	—	42.7	—	198.1	—
Total Counties	14.6	13.1	2,334.0	3,339.2	3,893.5	57.9
Metropolitan						
Metropolitan Roads						
Toronto Area	2.1	—	1.1	1.7	353.1	22.1
Regional Roads						
Ottawa-Carleton	—	—	64.7	125.2	404.3	0.9
Niagara	—	0.5	13.9	281.1	255.6	18.6
Total Regions	—	0.5	78.6	406.3	659.9	19.5
Improvement Districts						
Algoma	—	—	—	—	—	—
Cochrane	—	—	—	—	—	—
Kenora	—	—	—	—	—	—
Manitoulin	—	—	—	—	—	—
Muskoka	—	—	—	—	—	—
Nipissing	—	—	—	—	—	—
Parry Sound	—	—	—	—	—	—
Rainy River	—	—	—	—	—	—
Sudbury	—	—	—	—	—	—
Temiskaming	—	—	—	—	—	—
Thunder Bay	—	—	—	—	—	—
Total Districts	—	—	—	—	—	—
Unorganized Townships						
Grand Total	16.7	13.6	2,413.7	3,747.2	4,906.5	99.5

End of 1970

INCORPORATED TOWNSHIP ROADS

Total	Legally open	Earth graded and drained	Gravel or stone	Light bituminous surface	Asphalt concrete	Cement concrete	Other	Total
136.9	4.4	4.6	440.2	98.1	12.4	—	—	559.7
294.0	92.2	75.6	1,601.1	88.7	15.5	—	—	1,873.1
147.3	50.5	39.5	740.0	8.0	3.2	—	—	841.2
299.0	26.8	25.7	792.6	23.2	2.1	0.5	—	870.9
289.5	7.8	15.9	682.8	165.8	21.6	2.2	16.5	912.6
168.2	92.3	64.1	884.3	93.3	31.7	—	—	1,165.7
390.6	147.1	83.6	1,892.4	47.2	6.1	0.6	—	2,177.0
191.4	22.3	32.5	427.8	90.2	10.3	—	—	583.1
14.2	43.0	27.2	491.0	80.0	1.7	—	—	642.9
160.8	16.4	1.9	214.8	2.5	—	—	—	235.6
258.0	196.4	108.1	1,411.1	80.5	18.4	—	—	1,814.5
346.9	50.6	29.3	1,543.8	18.2	16.3	1.9	—	1,660.1
417.3	3.2	16.4	1,147.5	3.0	27.4	0.4	12.1	1,210.0
1,001.7	18.4	148.3	3,046.0	235.5	56.6	2.6	38.0	3,545.4
229.1	100.2	84.8	786.9	47.1	21.2	—	—	1,040.2
379.3	203.3	69.5	906.5	74.6	77.0	—	—	1,330.9
171.8	103.9	67.5	543.8	43.7	15.4	—	—	774.3
446.7	57.8	23.7	1,549.3	39.8	19.7	0.1	—	1,690.4
251.6	30.8	55.1	415.8	313.3	69.3	—	—	884.3
344.2	464.4	285.5	1,633.4	224.1	37.4	0.2	—	2,645.0
302.9	176.7	100.3	801.0	51.6	63.4	—	—	1,193.0
246.8	16.3	1.2	909.3	24.0	41.4	—	—	992.2
177.4	19.9	—	430.5	17.3	86.2	—	—	553.9
223.9	16.3	10.2	983.1	11.0	1.4	—	—	1,022.0
234.2	56.0	46.7	847.9	18.3	8.2	—	—	977.1
304.2	69.6	184.2	597.5	13.1	15.0	—	—	879.4
196.4	25.3	12.0	318.8	25.6	9.2	—	—	390.9
216.0	136.9	112.6	1,403.2	29.7	45.9	—	—	1,728.3
326.8	148.7	40.4	1,924.3	271.3	48.9	—	—	2,433.6
430.2	76.0	82.3	1,116.5	40.4	58.2	—	—	1,373.4
204.0	51.4	43.6	914.9	6.9	13.5	—	—	1,030.3
262.4	20.6	2.9	434.5	86.5	8.1	1.4	0.3	554.3
315.8	49.5	63.5	1,029.3	95.0	13.8	0.1	—	1,251.2
176.0	35.2	16.4	393.3	112.0	6.3	—	—	563.2
240.8	63.8	4.9	727.4	85.0	165.1	—	—	1,046.2
9,796.3	2,694.0	1,980.0	33,982.6	2,664.5	1,047.9	10.0	66.9	42,445.9
Borough Roads								
380.1	50.7	49.1	51.1	414.2	1,421.0	5.0	—	1,991.1
Township Roads								
595.1	102.3	26.9	849.6	118.5	232.1	—	—	1,329.4
569.7	24.0	79.0	289.7	56.7	—	—	—	449.4
1,164.8	126.3	105.9	1,139.3	175.2	232.1	—	—	1,778.8
—	205.2	24.0	565.0	1.3	27.9	—	—	823.4
—	618.8	40.0	483.2	14.6	23.7	—	7.0	1,187.3
—	10.7	1.9	189.2	7.2	0.3	—	—	209.3
—	12.9	24.9	373.8	—	1.3	—	—	412.9
—	118.4	72.4	722.8	178.8	6.3	—	—	1,098.7
—	38.4	7.0	421.1	14.2	17.3	—	—	498.0
—	96.6	40.3	874.2	24.0	23.9	—	—	1,059.0
—	26.7	47.3	554.5	0.6	19.1	—	—	648.2
—	45.5	113.9	593.4	33.0	47.2	—	—	833.0
—	33.5	—	583.4	34.6	15.5	—	—	667.0
—	62.1	34.6	478.2	64.4	38.2	—	1.6	679.1
—	1,268.8	406.3	5,838.8	372.7	220.7	—	8.6	8,115.9
—	252.2	1,296.4	6,106.1	14.5	13.5	—	4.0	7,686.7
341.2	4,392.0	3,837.7	47,117.9	3,641.1	2,935.2	15.0	79.5	62,018.4

APPENDIX No. 7

Summary of King's Highway Mileages
As of March 31, 1971

District	Concrete	High class bituminous	Low class bituminous	Gravel	Total
Chatham	77.4	482.4	19.4	8.4	587.6
London	49.5	541.1	20.3	—	610.9
Stratford	6.3	626.7	1.0	4.8	638.8
Hamilton	72.2	474.7	35.8	4.7	587.4
Owen Sound	10.7	559.3	18.8	19.6	608.4
Toronto	23.3	418.5	33.4	—	475.2
Port Hope	8.4	485.0	55.4	—	548.8
Kingston	63.1	553.1	95.3	—	711.5
Ottawa	59.3	578.3	33.6	3.1	674.3
Bancroft	—	207.0	141.1	19.6	367.7
Huntsville	—	302.5	79.4	24.8	406.7
North Bay	—	316.3	50.3	39.8	406.4
New Liskeard	—	341.6	119.9	68.9	530.4
Cochrane	—	320.3	7.1	15.5	342.9
Sudbury	—	306.2	2.8	114.2	423.2
Sault Ste. Marie	—	419.4	128.9	44.5	592.8
Thunder Bay	—	632.6	13.6	8.6	654.8
Kenora	—	499.4	37.1	67.5	604.0
Total	370.2	8,064.4	893.2	444.0	9,771.8

APPENDIX No. 8

Summary of Secondary Highway Mileages

Owen Sound	—	8.0	—	—	8.0
Toronto	—	—	—	—	—
Port Hope	—	6.0	52.2	25.7	83.9
Kingston	—	7.4	13.0	0.5	20.9
Ottawa	—	—	37.2	10.4	47.6
Bancroft	—	15.8	132.5	130.6	278.9
Huntsville	—	20.6	171.1	70.3	262.0
North Bay	—	8.4	104.4	105.3	218.1
New Liskeard	—	43.3	88.2	183.4	314.9
Cochrane	—	5.2	39.4	158.6	203.2
Sudbury	—	44.0	57.9	311.1	413.0
Sault Ste Marie	—	27.4	69.4	204.7	301.5
Thunder Bay	—	14.1	36.5	442.2	492.8
Kenora	—	7.3	8.2	334.1	349.6
Total	—	207.5	810.0	1,976.9	2,994.4

APPENDIX No. 9

Summary of Tertiary Road Mileage

North Bay	—	—	—	35.0	35.0
New Liskeard	—	—	—	6.2	6.2
Cochrane	—	—	—	44.0	44.0
Sudbury	—	4.2	—	—	4.2
Sault Ste Marie	—	—	—	—	—
Thunder Bay	—	—	—	116.8	116.8
Kenora	—	—	—	12.8	12.8
Total	—	4.2	—	214.8	219.0

APPENDIX No. 10

Road Mileages in Ontario

As of March 31, 1971

County or District	Concrete	High class bituminous	Low class bituminous	Gravel	Total Miles
Kings	370.2	8,064.4	893.2	444.0	9,771.8
Secondary	—	207.5	810.0	1,976.9	2,994.4
Tertiary	—	4.2	—	214.8	219.0
Total	370.2	8,276.1	1,703.2	2,635.7	12,985.2

APPENDIX No. 11

Types of Surface on the King's Highways

As of March 31, 1971

Algoma	—	371.4	80.1	36.4	487.9
Brant	18.5	62.3	6.3	4.7	91.8
Bruce	—	131.4	18.8	12.1	162.3
Cochrane	—	333.7	47.1	15.5	396.3
Dufferin	0.4	77.5	1.0	—	78.9
Elgin	36.3	109.3	—	—	145.6
Essex	13.8	155.7	19.4	—	188.9
Frontenac	4.3	135.4	35.7	—	175.4
Grey	4.7	150.5	—	7.5	162.7
Haldimand	—	70.1	2.3	—	72.4
Haliburton	—	68.9	37.1	1.2	107.2
Halton	7.8	79.8	—	—	87.6
Hastings	5.8	207.8	46.6	—	260.2
Huron	—	204.1	—	—	204.1
Kenora	—	409.9	19.8	67.5	497.2
Kent	43.1	158.9	—	2.5	204.5
Lambton	20.5	167.8	—	5.9	194.2
Lanark	—	105.2	9.4	—	114.6
Leeds-Grenville	28.1	208.2	21.6	—	257.9
Lennox-Addington	26.5	109.4	14.8	—	150.7
Manitoulin	—	25.8	—	28.5	54.3
Middlesex	13.0	209.1	—	—	222.1
Muskoka	—	156.0	31.2	6.8	194.0
Niagara	32.9	109.7	2.9	—	145.5
Nipissing	—	255.6	60.1	33.3	349.0
Norfolk	—	79.7	20.3	—	100.0
Northumberland-Durham	0.2	255.3	12.5	—	268.0
Ontario	—	154.9	2.7	—	157.6
Ottawa-Carleton	14.7	110.9	—	3.1	128.7
Oxford	4.5	139.8	—	—	144.3
Parry Sound	—	145.5	31.6	16.8	193.9
Peel	1.4	91.0	2.6	—	95.0
Perth	—	128.9	—	—	128.9
Peterborough	—	85.7	29.0	8.0	122.7
Prescott-Russell	—	59.0	3.3	—	62.3
Prince Edward	8.2	42.2	4.8	—	55.2
Rainy River	—	193.0	17.3	—	210.3
Renfrew	—	233.6	69.4	7.6	310.6
Simcoe	6.0	296.2	6.2	—	308.4
Stormont-Dundas-Glengarry	43.0	167.0	3.8	—	213.8
Sudbury	—	316.9	65.3	131.2	513.4
Thunder Bay	—	650.1	13.6	8.6	672.3
Timiskaming	—	192.2	74.6	42.0	308.8
Victoria	—	114.0	35.8	—	149.8
Waterloo	5.0	81.9	—	—	86.9
Wellington	9.6	155.3	—	4.8	169.7
Wentworth	—	138.5	24.3	—	162.8
York	21.9	159.3	21.9	—	203.1
Total	370.2	8,064.4	893.2	444.0	9,771.8

APPENDIX No. 12

Types of Surface on the Secondary Highways

County or District	High class bituminous	Low class bituminous	Gravel	Earth	Total Miles
Algoma	22.2	39.5	324.0	—	385.7
Cochrane	34.1	50.7	105.1	—	189.9
Frontenac	—	14.7	19.3	—	34.0
Haliburton	6.1	71.9	21.7	—	99.7
Hastings	3.3	21.9	13.7	—	38.9
Kenora	7.3	8.2	163.8	—	179.3
Lanark	—	14.0	—	—	14.0
Lennox-Addington	4.9	7.0	—	—	11.9
Manitoulin	—	40.8	131.5	—	172.3
Muskoka	25.0	56.4	22.2	—	103.6
Nipissing	4.8	32.9	50.7	—	88.4
Ontario	—	—	1.9	—	1.9
Parry Sound	3.8	151.3	98.2	—	253.3
Peterborough	1.7	40.0	28.9	—	70.6
Rainy River	3.1	10.5	207.1	—	220.7
Renfrew	8.8	57.3	52.3	—	118.4
Sudbury	49.2	25.5	161.9	—	236.6
Thunder Bay	16.2	56.7	428.7	2.4	504.0
Timiskaming	11.0	76.9	120.1	—	208.0
Victoria	6.0	33.8	23.4	—	63.2
Total	207.5	810.0	1,974.5	2.4	2,994.4

APPENDIX No. 13

Types of Surface on the Tertiary Roads

Cochrane	—	—	44.0	—	44.0
Kenora	—	—	12.8	—	12.8
Nipissing	—	—	35.0	—	35.0
Sudbury	4.2	—	—	—	4.2
Thunder Bay	—	—	116.8	—	116.8
Timiskaming	—	—	6.2	—	6.2
Total	4.2	—	214.8	—	219.0

APPENDIX No. 14

Schedule of Controlled Access Highways
April 1, 1970, to March 31, 1971

Highway	Location	Designation by Ontario regulation number	Mileage
3	Twps. of North and South Gosfield	149/70	5.91
17	Twp. of March	149/70	.55
7	Twp. of Wilmot	149/70	4.70
54	Twps. of Brantford and Onondaga	149/70	.90
138	Twp. of Cornwall	193/70	4.45
138	Twy. of Roxborough	193/70	2.65
7 & 12	Twp. of Brock	193/70	.93
11	Twps. of Armour, Strong, Machar, Laurier and S. Himsworth	213/70	31.66
11 & 17	City of North Bay	271/70	.32
8	Town of Preston & Twp. of Waterloo	272/70	2.70
416	Twps. of Edwardsburgh, Oxford and South Gower ..	272/70	27.00
85	City of Waterloo and Township of Woolwich	272/70	4.60
401w	Borough of North York	322/70	7.00
101	Twps. of Mountjoy, Ogden and Bristol	323/70	10.00
8	Twp. of N. Dumfries and City of Galt	340/70	8.90
17	Copper Cliff to Blind River	341/70	79.12
17	North Bay to Petawawa	424/70	121.90
10	Town of Orangeville and Twp. of Caledon	426/70	.50
7	Twp. of and Village of Madoc	443/70	3.65
17	Twp. of McNab	443/70	5.70
7	City of Kitchener and Twps. of Wilmot and Waterloo	458/70	4.50
66	Twp. of Teck	498/71	.91
401	Interchange at McCowan Rd. (Bor. of Scarborough)	499/70	
402	Twp. of Sarnia	500/70	7.00
Belfield			
Exps. Extension	Town of Brampton (Interchange)	500/70	.50
417	Twp. of Gloucester	500/70	2.00
417	Twp. of Hawkesbury	502/70	11.52
14	Twps. of Thurlow and Sidney	11/71	4.80
416	City of Ottawa	41/71	.57
417	Antrim to Quebec Boundary	41/71	28.60
Ottawa-			
Queensway	City of Ottawa	53/71	8.50
17	Twp. of Fitzroy	70/71	8.00
17	Twp. of McNab	80/71	4.70
3	Twps. of Southwold and Yarmouth and City of St. Thomas	81/71	13.00
144	Twp. of Rayside	87/71	2.89
Total Mileage			420.63

APPENDIX No. 15

Schedule of existing roads assumed as portions of the King's Highway,
Secondary and Tertiary Road Systems for the fiscal year ending March 31, 1971

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Dufferin	P-1835-66	Mono	Aug. 31/70	10	—
Durham	P-1680-44	Darlington	July 17/70	2	0.290
Dundas	P-6020-15	Winchester and Mountain	Feb. 16/71	31 and 43	0.110
Essex	P-1921-22	Gosfield S.	June 25/70	18	0.170
Frontenac	P-1921-23	Gosfield S.	July 14/70	18	—
Frontenac	P-2071-83	Kingston	Nov. 24/70	33	0.090
Grenville	P-2628-68	Pittsburgh	Dec. 23/70	15	0.120
Grey	P-1825-27	Edwardsburgh	May 25/70	16	0.150
Grey	P-1842-47	Glenelg, Bentinck	Aug. 20/70	6	0.360
Haliburton	P-1984-35	Artemesia	June 1/70	4	—
Haliburton	P-7047-23	Snowdon	June 18/70	519	0.310
Haliburton	P-7047-29	Snowdon	Nov. 16/70	519	0.076
Hastings	P-2353-32	Faraday	Apr. 7/70	28	0.076
Kent	P-3252-22	Harwich	Apr. 9/70	98	0.100
Kent	P-4097	Harwich	Apr. 9/70	51	3.600
Leeds	P-2067-26	N. Crosby	Oct. 2/70	42	0.850
Lennox and Addington	P-2069-79	Ernestown	Mar. 12/71	33	0.009
Metro Toronto	P-2083-305	Borough of Etobicoke	Nov. 16/70	27	0.019
	P-2083-306	Borough of Etobicoke	Nov. 10/70	27	0.280
	P-2083-307	Borough of Etobicoke	Nov. 30/70	27	0.680
	P-2083-326	Borough of Etobicoke	Nov. 19/70	27	0.230
	P-2083-334	Borough of Etobicoke	Nov. 19/70	27	0.230
	P-2920-217	Borough of Scarborough	(See Ontario County)		
Middlesex	P-3525-14	West Nissouri	Oct. 26/70	7	0.110
Middlesex	P-4071-12	Biddulph	Oct. 23/70	7	0.130
Niagara	P-2114-236	N. Grimsby	Nov. 9/70	Q.E.W.	0.250
Niagara	P-5087-9	Crowland	Mar. 15/71	140	0.160
Niagara	P-5088-23	Humberstone	Feb. 10/71	140	0.220
Niagara	P-5088-27	Humberstone	Feb. 22/71	140	0.613
Niagara	P-5088-30	Humberstone	Mar. 19/71	140	0.160
Niagara	P-5091	Thorold, Pelham	July 16/70	Lincoln St. Ext.	1.200
Ontario	P-5092	Grantham, Lincoln	Sept. 1/70	55	8.000
Ontario	P-5092-1	Niagara	Sept. 1/70	55	1.800
Ottawa-Carleton	P-2920-217	Pickering	Dec. 14/70	401	0.900
Ottawa-Carleton	P-1648-25	March	Oct. 7/70	17	0.450
Ottawa-Carleton	P-1870-103	Nepean	May 25/70	17	0.009
Ottawa-Carleton	P-3017-132	Gloucester	Nov. 4/70	17TC	0.230
Oxford	P-3525-14	East Nissouri	(See Middlesex County)		
Peel	P-1709-22	Toronto Gore	Jan. 27/71	7	0.230
Perth	P-4071-11	Blanshard	Oct. 26/70	3	0.005
Perth	P-4071-12	Blanshard	(See Middlesex County)		
Prince Edward	P-2049-63	Hallowell	Mar. 22/71	33	0.080
Renfrew	P-2155-15	Jones	Dec. 15/70	60	0.076
Simcoe	P-1837-18	Tosoronto	Sept. 17/70	89	—
Simcoe	P-1904-114	Collingwood	Sept. 25/70	26	0.240
Simcoe	P-1904-115	Collingwood	Oct. 19/70	26	—
Waterloo	P-1549-56	Wilmot	Apr. 15/70	7	—
Waterloo	P-1791-101	Waterloo, Wilmot	May 12/70	7	0.400

APPENDIX No. 16

**Schedule of Designations and Re-Designations of Sections of the King's Highway,
Secondary Highway and Tertiary Road Systems for the Fiscal Year Ending
March 31, 1971**

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Algoma	P-2104-40	Plummer Additional	Dec. 17/70	17TC	6.650
	P-2146-25	Shedden	Apr. 30/70	17	4.660
	P-2188-27	MacDonald	Oct. 29/70	17TC	3.750
	P-2220-45	Johnson	Dec. 3/70	17TC	7.480
	P-2235-15	Lewis	Apr. 30/70	17	2.580
	P-2237-25	Laird	Oct. 22/70	17TC	7.400
	P-2249-25	Tarbutt Additional	Oct. 22/70	17TC	4.980
	P-2253-66	Thessalon	Oct. 22/70	17TC	1.410
	P-2995-7	4E	Dec. 3/70	129	5.270
	P-3219-3	28	July 7/70	129	6.340
	P-3220-3	29	July 7/70	101 and 129	3.300
	P-3263-3	2E	Dec. 3/70	129	1.810
	P-3276-4	3E	Dec. 3/70	129	6.610
	P-3448-3	Elgie	July 28/70	631	10.080
	P-3450-3	McEwing	July 28/70	631	5.580
	P-3451-5	Frost	July 28/70	631	6.120
	P-8080-4	Parkinson	July 28/70	546	6.740
	P-8143-12	Lefroy (Mun. of Plummer) Additional and Thessalon	Oct. 22/70	17TC	5.150
	P-8152-1	Grasett	July 28/70	546	1.570
Bruce	P-2100-26	Amabel, Arran	July 11/70	21	11.500
	P-2277-56	Village of Hepworth	(See Grey County)		
Cochrane	P-2134-37	Whitney	Dec. 3/70	101	4.500
	P-2173-38	German	Nov. 26/70	101	2.510
	P-2243-14	Taylor, Currie	Dec. 3/70	101	6.040
	P-2322-68	Calvert, Clergue	Oct. 22/70	67	5.420
	P-2422-2	Hoyle	Nov. 5/70	101	0.430
	P-2433-12	Casgrain	Aug. 12/70	583	5.920
	P-2434-33	Shackleton	Sept. 3/70	11	9.000
	P-2662-35	Calder	Sept. 3/70	11	13.850
	P-2662-36	Colquhoun	Sept. 3/70	11	3.520
	P-2691-26	Fauquier	May 7/70	11	10.210
	P-2697-37	Mountjoy	Apr. 30/70	101	0.690
	P-2793-5	Cody	July 2/70	803	2.300
	P-2865-3	McCool	Oct. 29/70	101	1.570
	P-2867-2	Michaud	Nov. 26/70	101	4.980
	P-2879-36	Kendrey and Town of Smooth Rock Falls	Aug. 20/70	11	1.380
	P-2897-7	Ottaway	Dec. 3/70	11	3.020
	P-2947-7	Holloway	Nov. 26/70	101	5.930
	P-3113-14	Brower, Kennedy	Dec. 17/70	574	6.950
	P-3271-7	Fauquier	Aug. 20/70	581	3.380
	P-3358-8	Marriott	Nov. 26/70	101	0.560
	P-3387-4	Ogden	Apr. 30/70	101	2.330
	P-3416-9	Bristol	Apr. 30/70	101	7.080
	P-7176-6	Matheson, Hoyle	Apr. 30/70	610	1.030
	P-7194-9	German	Oct. 1/70	67	6.170
	P-7229	Matheson	July 2/70	803	0.600
	P-8029-4	Clute	Aug. 12/70	636	3.000
	P-8103-4	Fox, Brower, Kennedy	Jan. 21/71	652	6.920
	P-7118-1	Stimson, DEMPAY	Jan. 21/71	652	4.580
Dundas	P-6020-16	Winchester, Mountain	Mar. 2/71	31 and 43	3.600
Elgin	P-4099	Yarmouth, Southwold	Dec. 3/70	3	13.000

DEPARTMENT OF HIGHWAYS, ONTARIO

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Essex	P-1827-9	Rochester	June 11/70	2	4.620
	P-2080-52	Anderdon	July 16/70	18	5.450
	P-2327-7	Maidstone	Apr. 1/70	98	8.050
	P-2966-69	Maidstone	Dec. 3/70	39	3.150
	P-4051-19	Tilbury West	Sept. 17/70	77	5.100
Frontenac	P-1639-85	Kingston	Sept. 22/70	2	6.540
	P-1826-41	Pittsburgh	Oct. 15/70	2	14.200
	P-1878-18	Oso	Nov. 25/70	7TC	6.820
Glengarry	P-6079-1	Kenyon	Dec. 4/70	417	7.260
	P-6089	Lochiel	Dec. 4/70	417	9.080
Grenville	P-1668-29	Edwardsburgh	Oct. 16/70	2	10.660
	P-1989-20	Augusta	Mar. 4/71	2	9.260
	P-6073-35	Edwardsburgh	May 8/70	416	25.000
Grey	P-2277-56	Keppel	July 2/70	6	15.000
Haldimand	P-5093	Canborough	Jan. 14/71	75	2.200
Haliburton	P-2117-6	Dysart	Dec. 17/70	121	3.980
	P-2217-59	Dysart	Sept. 3/70	121	2.160
	P-2605-64	Sherborne	Feb. 4/71	35	7.210
	P-2651-74	Stanhope, Hindon	Dec. 3/70	35	13.000
	P-2789-52	Lutterworth	Oct. 1/70	35	12.680
	P-7159-2	Dysart	Oct. 22/70	530	1.290
	P-1487-37	Thurlow	Sept. 22/70	2	4.760
	P-1949-46	Madoc	Sept. 4/70	7TC	9.340
Hastings	P-1976-34	Tyendinaga	July 10/70	2	13.240
	P-2073-32	Rawdon	Dec. 4/70	14	13.020
	P-2197-31	Bangor	July 10/70	62	9.760
	P-2230-18	Dungannon	Aug. 6/70	62	6.540
	P-2304-19	Limerick	Dec. 24/70	62	11.520
	P-2309-39	Tudor	Nov. 25/70	62	12.940
	P-2563-41	Thurlow, Sidney	Nov. 25/70	14	4.880
	P-2773-42	Madoc	Feb. 23/71	62	11.800
	P-2179-14	Osnaburgh Indian Reserve No. 63B	July 2/70	599	6.760
	P-2179-17	Sabaskong Bay Indian Reserve No. 35D and Twp. of Godson	Dec. 3/70	71	0.880
	P-2179-19	Whitefish Bay Indian Reserve No. 32A	Dec. 17/70	71	1.480
	P-2190-33	Langton (Mun. of Machin)	July 2/70	17TC	6.950
	P-2245-19	Melick	Aug. 20/70	659	9.680
	P-2321-7	Sutherland	May 7/70	619	6.140
Kenora	P-2348-5	Southworth	July 2/70	72	1.480
	P-2512-8	Kirkup	July 28/70	71	4.330
	P-2520-4	Lemay	July 28/70	71	6.650
	P-2522-35	Boys	Aug. 12/70	17TC	6.420
	P-2524-3	Tweedsmuir	July 2/70	71	3.690
	P-2535-17	Willingdon (Improvement District of Sioux Narrows) Whitefish Bay Indian Reserve No. 34A	Dec. 17/70	71	6.140
	P-2600-6	Crozier	Apr. 30/70	602	3.290
	P-2630-9	Hartman	July 2/70	72	7.500
	P-2632-2	Laval	July 2/70	72	2.830
	P-2633-2	McAree	July 2/70	72	5.620
	P-2641-4	Pickerel	July 2/70	72	7.740
	P-2646-4	Jordan and Un- surveyed Territory	July 2/70	72	6.850
	P-2647-5	Vermilion Additional	Aug. 12/70	116	2.450
	P-2667-7	MacNicol	July 7/70	17TC	6.840
	P-2668-3	Jackman	July 7/70	17TC	1.710
	P-2901-15	Mather, Kingsford	June 11/70	615	4.100
	P-3153-5	Dewan	July 2/70	17TC	6.660

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
	P-3183-6	McNevin	July 7/70	17TC	6.420
	P-3493-17	Wainwright	July 2/70	119	5.270
	P-3497-10	Britton	July 7/70	119	6.280
	P-3503-5	Redditt	Dec. 10/70	128	6.640
	P-8019-6	Drayton and Grand Trunk Pacific Block 10	July 28/70	116	8.140
	P-8022-1	Fleming	Apr. 30/70	615	0.220
	P-8042-2	Senn	Apr. 30/70	615	2.340
	P-8088-11	Lash (Mun. of Emo)	Apr. 30/70	602	5.600
	P-8090-8	Wabigoon, Smellie	June 11/70	647	2.400
	P-8132-3	Dilke	Apr. 30/70	619	1.990
Kent	P-1697-32	Romney, Village of Wheatley	Aug. 20/70	3	12.700
	P-1717-8	Tilbury East, Town of Tilbury	June 11/70	2	7.300
Lambton	P-1859-25	Dawn	Sept. 3/70	21	11.600
	P-2311-116	Sarnia	Sept. 17/70	402	7.000
	P-2359-26	Plympton	Feb. 4/71	21	1.700
Lanark	P-1879-22	S. Sherbrooke	Nov. 26/70	7TC	6.440
	P-2007-75	Drummond	Dec. 4/70	7TC	4.160
	P-2817-14	Ramsay	Dec. 7/70	7TC	4.420
Leeds	P-2066-21	Bastard	May 19/70	42	0.760
	P-2477-7	Lansdowne	Aug. 6/70	2	8.400
	P-2938-16	Bastard	Mar. 31/71	15	10.660
	P-3322-4	Escott	July 31/70	2	5.860
	P-3337-19	Leeds	Aug. 6/70	2	4.840
Lennox and Addington	P-1824-16	Ernestown	Sept. 22/70	2	11.620
	P-2713-15	N. Fredericksburgh	Sept. 22/70	2	3.940
Manitoulin	P-2460-39	Sheguiandah	Jan. 28/71	68	6.600
	P-7003-9	Tehkummah	Sept. 3/70	542	1.420
Metro Toronto	P-2920-210	Borough of Scarborough	Sept. 3/70	401	1.940
Middlesex	P-2044-29	West Williams, Town of Parkhill	July 2/70	7	8.500
Muskoka	P-1753-108	Morrison	Sept. 3/70	11	9.110
	P-2251-43	Ridout	Feb. 4/71	118	4.220
	P-2326-46	Stephenson, Watt	Jan. 28/71	532	6.380
	P-2537-102	Monck	Oct. 8/70	118	2.320
	P-2605-64	Ridout	(See Provincial County of Haliburton)		
	P-2605-66	Ridout	Aug. 20/70	35	1.580
	P-2857-53	Muskoka	Oct. 8/70	69	1.660
	P-3266-51	McLean	Jan. 21/71	118	3.940
	P-3297-21	Macaulay	Nov. 5/70	118	3.890
	P-3445-4	Watt	Oct. 22/70	118	0.570
Niagara	P-1654-78	Bertie, Humberstone	Oct. 22/70	3	1.120
	P-1819-48	Thorold	Aug. 6/70	20	1.800
	P-1884-43	West Lincoln	Oct. 8/70	20	0.270
	P-1910-31	Pelham	Oct. 1/70	20	0.250
	P-5091	Crowland, Thorold, Pelham	Aug. 12/70	Lincoln St. Ext.	1.200
	P-5092	Grantham, Niagara	Nov. 5/70	55	8.000
	P-5092-1	Niagara	Nov. 5/70	55	1.800
	P-5094	West Lincoln	Jan. 14/71	75	8.500
Nipissing	P-2102-25	E. Ferris	Feb. 4/71	94	5.800
	P-2108-78	Papineau	May 28/70	17	4.920
	P-2204-57	Cameron	May 28/70	17	11.760
	P-2257-99	Widdifield	Aug. 6/70	63	8.950
	P-2258-14	Phelps	Sept. 3/70	63	2.700
	P-2261-45	Springer	Dec. 17/70	17	1.460
	P-2413-62	Airy	Sept. 29/70	60	14.600
	P-2417-7	Sabine	Sept. 15/70	60	0.800
	P-2494-23	Commanda	Jan. 14/71	17	6.450
	P-2497-16	Widdifield	May 28/70	17	0.340
	P-2724-38	MacPherson	Dec. 10/70	64	1.460

DEPARTMENT OF HIGHWAYS, ONTARIO

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Norfolk	P-2785-118	Widdfield	Mar. 26/70	N.B.B.P.	0.320
	P-2787-2	Lanark	Sept. 10/70	7TC	1.780
	P-2891-7	Loudon	Dec. 10/70	64	2.260
	P-3538-17	Canisbay	Feb. 18/71	60	1.730
	P-1713-44	Woodhouse, Town of Port Dover	Jan. 14/70	6	6.100
Northumberland	P-1761-44	Seymour	June 11/70	30	1.000
Ontario	P-1849-25	Pickering	June 4/70	7	1.440
	P-2755-11	Uxbridge, Reach	Jan. 21/70	47	1.020
Ottawa-Carleton	P-1666-41	Fitzroy	Dec. 14/70	17N	8.000
	P-3409-46	Ottawa	Dec. 4/70	Ottawa- Queensway	9.232
Parry Sound	P-6062-17	City of Ottawa	Dec. 11/70	416	1.360
	P-6067-21	Gloucester	Oct. 21/70	417	2.040
	P-2441-26	Hagerman	Oct. 29/70	124	0.350
	P-2441-27	Hagerman	Oct. 29/70	124	1.050
	P-3533-22	Ferguson	Feb. 4/71	124	3.400
Peel	P-7087-20	Chapman	Feb. 18/71	520	1.360
	P-1709-21	Toronto Gore	July 16/70	7	7.350
	P-5083-4	Chinguacousy	Sept. 17/70	Belfield Expy. Ext.	
Perth	P-2006-58	Downie	July 16/70	7	5.500
	P-2395-37	Logan, Elma	June 11/70	23	10.000
Peterborough	P-2356-56	Burleigh	Oct. 22/70	28	0.240
Prescott	P-6078-45	E. Hawkesbury	Dec. 7/70	417	13.070
	P-6080-3	Caledonia	Dec. 7/70	417	3.480
	P-6087-2	S. Plantagenet	Dec. 7/70	417	1.660
	P-6088	W. Hawkesbury	Dec. 7/70	417	2.480
Rainy River	P-2111-15	Crozier (Mun. of Alberton)	Oct. 1/70	11	6.440
	P-2165-10	Nelles	May 14/70	619	6.110
	P-2166-43	Manitou Rapids Indian Reserve No. 11	Oct. 1/70	71	2.430
	P-2216-24	Lash (Mun. of Emo)	May 14/70	11	6.200
	P-2286-18	Wild Lands Reserve (Mun. of Atwood)	May 7/70	600	7.570
	P-2344-8	Dewart	Aug. 20/70	600	5.130
	P-2357-7	Pattulo	Aug. 20/70	617	6.100
		(Mun. of Morley)			
	P-2435-21	Potts	Aug. 20/70	71	6.040
		(Mun. of Chapple)			
	P-2619-7	Shenston and Rose- berry, Long Sault Indian Reserves Nos. 12 and 13 (Mun. of Chapple)	June 11/70	11	7.320
	P-2622-16	Barwick and Dobie and Manitou Indian Reserve No. 11 (Mun. of Chapple)	June 11/70	11	6.190
	P-2677-6	Devlin (Mun. of Lavellee)	Jan. 21/71	613	6.250
	P-3289-9	Woodyatt (Mun. of Lavellee) and Little Forks Indian Reserve No. 10	Oct. 1/70	602	6.730
	P-3349-14	McCrosson	July 7/70	621	6.700
	P-3498-7	Potts	June 11/70	615	6.740
		(Mun. of Chapple)			
	P-8013-8	Roddick	Oct. 1/70	602	6.110
	P-8096-3	Morley, Pattulo	June 11/70	617	5.030
	P-8139-4	Tovell	June 11/70	619	6.140
	P-8141-2	Morson	July 28/70	619	4.920
Renfrew	P-1823-25	McNab	Aug. 5/70	17N	6.080
	P-1823-42	McNab	Dec. 11/70	17N	2.640

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
	P-1823-46	McNab	Feb. 9/71	17N	1.500
	P-2128-94	Rolph	May 28/70	17	14.580
	P-2221-54	Buchanan	May 28/70	17	3.850
	P-2250-6	Fraser	Dec. 4/70	62	10.180
	P-2381-38	Radcliffe	Aug. 5/70	62	9.080
	P-2585-38	Head	May 28/70	17	13.250
	P-2588-45	Petawawa	July 21/70	17	6.240
	P-2601-36	Clara	May 28/70	17	11.300
	P-2610-27	Maria	May 28/70	17	11.290
	P-2902-20	Sherwood	Dec. 24/70	62	3.820
	P-3303-18	Richards	Dec. 24/70	62	7.940
Stormont	P-6086-2	Roxborough	Dec. 18/70	417	3.800
Sudbury	P-2101-26	Dunnet, Ratter	Jan. 14/71	17	6.170
	P-2138-30	Capreol	Feb. 4/71	69	4.620
	P-2210-16	Hallam	Apr. 30/70	17	6.000
	P-2211-22	Baldwin	Apr. 30/70	17	6.110
	P-2276-37	Hagar	Jan. 14/71	17	8.180
	P-2427-38	Graham	Apr. 30/70	17	1.690
	P-2531-13	Salter	Apr. 30/70	17	5.140
	P-2532-14	Victoria	Apr. 30/70	17	5.870
	P-2718-38	Rayside	Dec. 17/70	144	2.870
	P-2796-10	May	Apr. 30/70	17	6.320
	P-2899-8	Haddo	Dec. 10/70	64	4.210
	P-2906-16	Denison	Apr. 30/70	17	4.920
	P-2932-7	Louise	Apr. 30/70	17	2.000
	P-2961-15	Lorne	Apr. 30/70	17	6.910
	P-2982-22	Nairn	Apr. 30/70	17	3.480
	P-3002-14	Chapleau Indian Reserve No. 74A and Twp. of Chapleau	Aug. 20/70	129	5.990
	P-3048-30	Cherriman, Haddo	July 2/70	535	6.160
	P-3315-12	Bigwood	Dec. 3/70	607	0.950
	P-3272-32	Delamere, Bigwood	Nov. 26/70	64	5.260
	P-7044-2	Sewell	Dec. 3/70	101	2.490
Thunder Bay	P-2284-17	Oliver	July 28/70	11A & 17A	3.860
	P-2285-10	Strange	July 7/70	588	6.800
	P-2565-27	Paipooonge	Oct. 22/70	61	4.780
	P-2890-29	City of Thunder Bay	Aug. 27/70	130	6.580
	P-2967-22	Gorham	Sept. 3/70	589	4.990
	P-3268-34	Unsurveyed Territory	July 28/70	614	9.740
	P-3268-35	Unsurveyed Territory	July 28/70	614	7.890
	P-3268-36	Unsurveyed Territory	July 28/70	614	8.490
	P-3296-5	Leslie (Improvement District of Manitouwadge)	Aug. 6/70	614	6.550
	P-3308-9	Pic (Mun. of Marathon)	July 28/70	627	4.990
	P-3361-32	Unsurveyed Territory	May 7/70	599	3.650
	P-3361-33	Unsurveyed Territory	July 7/70	599	6.620
	P-3370-9	Unsurveyed Territory	June 11/70	625	18.400
	P-3444-11	McTavish	July 7/70	587	3.440
	P-8051-3	Unsurveyed Territory	June 11/70	623	2.400
	P-8053-3	Hardwick	Jan. 14/71	588	6.230
Timiskaming	P-2545-47	Teck	Aug. 27/70	66	0.910
	P-2569-24	Henwood	Jan. 21/71	65	6.600
	P-3059-2	Kimberley	Dec. 10/70	65	7.360
	P-3118-14	Cane	Aug. 20/70	65	6.010
	P-3234-16	Barber	Aug. 20/70	65	3.210
	P-3432-1	Cairo	Jan. 28/71	66	3.380
	P-3433-3	Flavelle	Aug. 12/70	66	6.750
	P-3458-9	Gross	Jan. 21/71	66	6.000
	P-7009-4	Hillary	Dec. 3/70	101	4.270
	P-7023-2	Farr	Dec. 10/70	65	8.400
	P-7046-4	Cairo	Feb. 4/71	65	3.190

DEPARTMENT OF HIGHWAYS, ONTARIO

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Victoria	P-2754-34	Somerville	May 14/70	121	0.400
	P-3257-20	Dalton	Oct. 1/70	503	5.000
	P-3415-1	Somerville	May 14/70	649	0.260
	P-3415-2	Somerville	Sept. 3/70	649	0.020
	P-5029-24	Carden	Oct. 1/70	503	5.800
	P-5029-25	Carden	Oct. 1/70	503	0.770
Waterloo	P-1417-78	Waterloo	Mar. 26/70	8	2.700
	P-1688-23	Waterloo	June 11/70	24	2.060
	P-1791-102	Wilmot, Waterloo, City of Kitchener	Aug. 12/70	7	4.500
	P-1812-28	North Dumfries	May 7/70	8	8.900
	P-2078-18	Woolwich, City of Waterloo	Apr. 16/70	85	4.600
	P-2437-55	Woolwich	Oct. 8/70	86	3.600
Wellington	P-2426-20	Eramosa	Dec. 17/70	24	6.100
Wentworth	P-1991-41	Beverly	July 16/70	8	8.500
	P-2008-27	Binbrook	Oct. 1/70	56	0.500
York	P-1709-21	Vaughan	(See Peel County)		
	P-3120-19	East Gwillimbury	Sept. 17/70	48	0.270

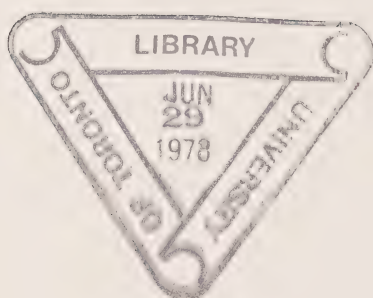
APPENDIX No. 17

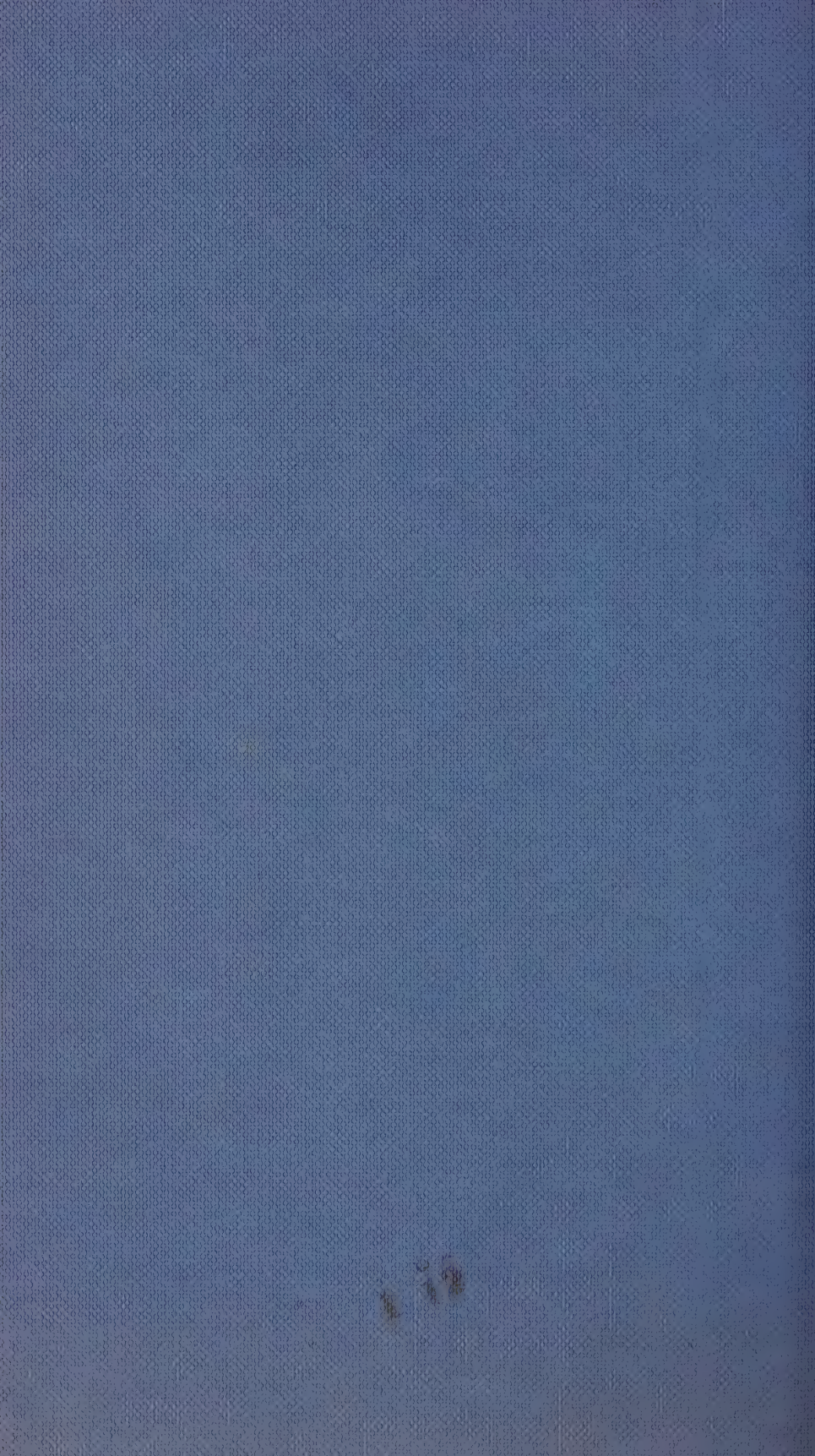
Schedule of Reversions and Transfers of Sections of the King's Highway and Secondary Highway Systems for the fiscal Year Ending March 31, 1971

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Algoma	P-8088-17	City of Sault Ste. Marie	Dec. 17/70	550	3.350
Cochrane	P-2222-42	Town of Kapuskasing	Apr. 16/70	11	3.900
	P-2222-43	Town of Kapuskasing	Apr. 16/70	11	2.500
	P-2322-64	Calvert, Teefy	Mar. 26/70	67 and 578	1.210
	P-3482-14	Calvert, Teefy	Apr. 1/70	67, 577 and 578	1.790
Essex	P-1509-14	Tilbury W.	Apr. 1/70	98	6.300
	P-1661-23	Sandwich S.	Apr. 1/70	98	4.420
	P-1827-8	Rochester	June 1/70	2	1.490
	P-1829-13	Sandwich S.	June 1/70	2	5.000
	P-1844-8	Maidstone	June 1/70	2	8.100
	P-1913-31	Malden	June 1/70	18	0.550
	P-2327-7	Maidstone	Apr. 1/70	98	8.050
	P-2442-17	Town of Leamington	Aug. 12/70	3	0.400
	P-3008-10	Tilbury N.	Apr. 1/70	98	2.840
	P-3212-4	Rochester	Apr. 1/70	98	6.140
	P-3293-2	Maidstone	June 1/70	114	0.250
	P-3330-2	Sandwich S.	June 1/70	114	0.900
	P-3345-4	Gosfield S.	June 1/70	107	0.900
Frontenac	P-1639-84	Kingston	Aug. 5/70	2	0.150
	P-2274-52	Barrie	Feb. 23/71	41	1.660
	P-2421-36	Abinger	Feb. 15/71	2	0.380
Grenville	P-2816-65	Edwardsburgh	May 8/70	401	1.670
Halton	P-1710-30	Nelson	Apr. 1/70	25	2.300
	P-1959-79	Trafalgar	Apr. 1/70	2	7.100
	P-3114-28	Trafalgar	Apr. 29/70	122	2.400
Kenora	P-2602-20	Morson	Apr. 30/70	621	1.950
	P-3349-13	McCroscon, Tovell	Apr. 30/70	621	4.250
	P-2771-17	Raleigh	May 21/70	98	9.300
Kent	P-2828-7	Tilbury E.	May 21/70	98	9.900
	P-2828-8	Town of Tilbury	May 21/70	7093	0.700
	P-2942-43	Zone	May 21/70	7106	1.250
Leeds	P-3008-10	Tilbury N.	Apr. 1/70	98	2.840
	P-3252-23	Harwich	May 21/70	98	4.550
	P-1847-32	Yonge	Sept. 8/70	25	7.440
Lennox and Addington	P-2016-26	Escott	Sept. 8/70	25	6.280
	P-2026-56	Lansdowne	Sept. 8/70	25	7.080
	P-2140-71	Leeds	Sept. 8/70	401	1.680
Metro Toronto	P-2406-36	Yonge	Sept. 2/70	42	0.019
	P-2975-18	Lansdowne	Sept. 2/70	42	0.019
	P-3095-144	Elizabeth	May 25/70	401	1.480
Middlesex	P-1639-87	Kingston	Feb. 12/71	41	0.150
	P-2150-48	Denbigh	Oct. 16/70	41	0.540
	P-2770-678	Borough of North York	June 4/70	401	0.080
Muskoka	P-1691-75	Biddulph	Jan. 14/71	4	—
	P-2177-24	Caradoc	Dec. 3/70	81	—
	P-3266-48	McLean	June 5/70	118	0.573
Niagara	P-3297-20	Macaulay	Oct. 31/70	118	3.130
	P-7139-24	Medora	Aug. 1/70	118	0.390
	P-1442-8	Crowland	Aug. 20/70	3A	1.740
Norfolk	P-1746-13	Wainfleet	Aug. 20/70	3A	7.540
	P-1799-38	Gainsborough	Aug. 20/70	57	2.870
	P-1970-5	Bertie	Sept. 1/70	3C	6.800
Parry Sound	P-2043-115	Thorold	Aug. 20/70	58	0.320
	P-2043-116	Thorold	Aug. 20/70	58	1.400
	P-2084-17	Wainfleet	Aug. 20/70	57	3.830
Essex	P-1747-52	Town of Simcoe	Dec. 17/70	24	0.090
	P-4037-12	North Walsingham	Oct. 1/70	59	—
	P-2510-56	Humphry	Nov. 8/70	532	3.560
	P-7087-18	Chapman	Apr. 1/70	520	0.320

DEPARTMENT OF HIGHWAYS, ONTARIO

County, district or regional mun.	Plan No.	Township	Effective date	Hwy. No.	Miles
Peel	P-1659-104	Toronto	Apr. 1/70	10	3.200
	P-1801-191	Toronto	Apr. 1/70	5	7.500
	P-1954-78	Toronto	Apr. 1/70	2	7.630
	P-1954-79	Toronto	Apr. 1/70	2	0.150
	P-2002-74	Chinguacousy	Dec. 10/70	10	1.230
	P-3106-42	Toronto	Apr. 1/70	122	2.400
Perth	P-1958-29	Blanshard	May 7/70	7111	1.200
	P-2010-45	N. and S. Easthope	May 21/70	7B and 8B	—
Prince Edward	P-2805-40	Sophiasburgh	Apr. 1/70	49	0.900
	P-2805-42	Sophiasburgh	Apr. 1/70	49	0.270
	P-3068-18	Hallowell	Apr. 1/70	49	0.590
Simcoe	P-2756-94	City of Barrie	May 14/70	400	0.250
Sudbury	P-2210-17	Hallam	Oct. 17/70	17	0.050
Thunder Bay	P-2572-28	City of Thunder Bay	Sept. 17/70	61	0.800
	P-2890-29	City of Thunder Bay	Oct. 1/70	130	6.580
	P-8070-23	City of Thunder Bay	Sept. 17/70	Lkhd. Exp.	0.410
Timiskaming	P-7055-6	Evanturel	Apr. 1/70	624	0.320
Waterloo	P-1549-59	Wilmot	May 21/70	7B and 8B	4.500
	P-1979-28	Town of Elmira	Aug. 12/70	85	0.460
Wellington	P-3267-11	Guelph	Apr. 1/70	86	0.100
	P-3284-6	Pilkington	Apr. 1/70	86	0.120
Wentworth	P-1699-124	E. and W. Flamboro	Oct. 22/70	6	0.275
	P-1991-40	Beverly	Apr. 1/70	8	2.200







BINDING SECT. AUG 7 1985

